Shell Gadus S2 V100 2

Version 4.6		Revision Date 21.03.2023	Print Date 22.03.2023		
SECTION 1. PRODUCT AND CON	۸P	ANY IDENTIFICATION			
Product name		Shell Gadus S2 V100 2			
r toduct name	•				
Product code	÷	001D8463			
Manufacturer or supplier's d	leta	ails			
Supplier	:	Viva Energy Australia Pty Ltd			
		(Formerly: The Shell Company of Aust (ABN 46 004 610 459)	ralla)		
		720 Bourke Street			
		Docklands			
		Victoria 3008 Australia			
Telephone		+61 (0)3 8823 4444			
Telefax		+61 (0)3 8823 4800			
Emergency telephone	:	1800 651 818 (Australia). ; POISONS	INFORMATION		
number		CENTRE: 13 11 26 (Australia).			
Recommended use of the ch	Recommended use of the chemical and restrictions on use				
Recommended use	:	Automotive and industrial grease.			
SECTION 2. HAZARDS IDENTIFICATION					
GHS Classification					
		atonoo (mixturo dooo not moot the close	ification oritoria		
Dased on available data this s	ub	stance / mixture does not meet the class	sincation criteria.		

GHS label elements	
Hazard pictograms	: No Hazard Symbol required
Signal word	: No signal word
Hazard statements	: PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria.

Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.

Precautionary statements

Prevention: No precautionary phrases.

Response: No precautionary phrases.

Storage:

:

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Disposal:

No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Zinc naphthenate	12001-85-3	Skin Sens.1B; H317 Eye Irrit.2; H319 Aquatic Chronic2; H411	0.1 - 0.9
Alkaryl amine	68411-46-1	Repr.2; H361	0.1 - 0.9
Alkyl thiadiazole	13539-13-4	Skin Irrit.2; H315 Skin Sens.1A; H317 Acute Tox.4; H332 Aquatic Chronic4; H413	0.01 - 0.09
Triazole derivative	91273-04-0	Skin Corr.1B; H314 Skin Sens.1A; H317 Aquatic Acute2; H401 Aquatic Chronic2; H411	0.01 - 0.09

Hazardous components

For explanation of abbreviations see section 16.

:

SECTION 4. FIRST-AID MEASURES

If inhaled

No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.

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In case of skin contact	: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.	
	When using high pressure equi under the skin can occur. If hig casualty should be sent immed for symptoms to develop. Obtain medical attention even i wounds.	h pressure injuries occur, the liately to a hospital. Do not wait
In case of eye contact	 Flush eye with copious quantiti Remove contact lenses, if pres rinsing. If persistent irritation occurs, ob 	ent and easy to do. Continue
If swallowed	: In general no treatment is nece are swallowed, however, get m	
Most important symptoms and effects, both acute and delayed	 Oil acne/folliculitis signs and sy of black pustules and spots on Ingestion may result in nausea 	the skin of exposed areas.
	Local necrosis is evidenced by tissue damage a few hours follo	
Protection of first-aiders	: When administering first aid, er appropriate personal protective incident, injury and surrounding	e equipment according to the
Notes to physician	: Treat symptomatically.	
	High pressure injection injuries intervention and possibly steroi damage and loss of function. Because entry wounds are sma seriousness of the underlying d determine the extent of involve anaesthetics or hot soaks shou can contribute to swelling, vasc surgical decompression, debrid	id therapy, to minimise tissue all and do not reflect the damage, surgical exploration to ment may be necessary. Local IId be avoided because they ospasm and ischaemia. Prompt
	foreign material should be perference anaesthetics, and wide explora	ormed under general

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.

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Specific hazards during firefighting	 Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
Specific extinguishing methods	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	: Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).
Hazchem Code	: NONE
SECTION 6. ACCIDENTAL RELEA	SE MEASURES
Personal precautions, protective equipment and emergency procedures	: Avoid contact with skin and eyes.
Environmental precautions	: Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Methods and materials for containment and cleaning up	: Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Additional advice	 For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.

SECTION 7. HANDLING AND STORAGE

General Precautions	 Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Advice on safe handling	Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

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Version 4.6	Revision Date 21.03.2023 Properly dispose of any contaminated ra materials in order to prevent fires.	Print Date 22.03.2023 ags or cleaning
Avoidance of contact :	Strong oxidising agents.	
Storage		
Other data :	Keep container tightly closed and in a co place. Use properly labeled and closable conta	
	Store at ambient temperature.	
Packaging material :	Suitable material: For containers or cont steel or high density polyethylene. Unsuitable material: PVC.	ainer linings, use mild
Container Advice :	Polyethylene containers should not be e temperatures because of possible risk o	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	Australia. Workplace Exposure Standards for Airborne Contaminant s.
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

Components with workplace control parameters

Biological occupational exposure limits

Biological Limit Values (BLV) have not been established for this material.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

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National Institute of Occupationa	I Safety and Health (NIOSH), USA: Manual of Analytical Meth
http://www.cdc.gov/niosh/	Administration (OCHA) LICA: Consultant and Arich tical Mathe
http://www.osha.gov/	Administration (OSHA), USA: Sampling and Analytical Metho
	E), UK: Methods for the Determination of Hazardous Substar
http://www.hse.gov.uk/	
Institut für Arbeitsschutz Deutsch http://www.dguv.de/inhalt/index.j	nen Gesetzlichen Unfallversicherung (IFA) , Germany
	et de Securité, (INRS), France http://www.inrs.fr/accueil
Engineering measures	The level of protection and types of controls necessary will
	vary depending upon potential exposure conditions. Select
	controls based on a risk assessment of local circumstances
	Appropriate measures include: Adequate ventilation to control airborne concentrations.
	Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generate
	greater potential for all borne concentrations to be generate
	General Information:
	Define procedures for safe handling and maintenance of
	controls. Educate and train workers in the hazards and control
	measures relevant to normal activities associated with this
	product.
	Ensure appropriate selection, testing and maintenance of
	equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.
	Drain down system prior to equipment break-in or
	maintenance.
	Retain drain downs in sealed storage pending disposal or
	subsequent recycle. Always observe good personal hygiene measures, such as
	washing hands after handling the material and before eatin
	drinking, and/or smoking. Routinely wash work clothing an
	protective equipment to remove contaminants. Discard
	contaminated clothing and footwear that cannot be cleaned Practice good housekeeping.
	Due to the product's semi-solid consistency, generation of mists and dusts is unlikely to occur.
Personal protective equipment	t
Protective measures	
Personal protective equipment (I PPE suppliers.	PPE) should meet recommended national standards. Check v

Respiratory protection	:	No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne
		5 5

sion 4.6	Revision Date 21.03.2023	Print Date 22.03.20
	concentrations to a level which is health, select respiratory protecti specific conditions of use and me Check with respiratory protective Where air-filtering respirators are appropriate combination of mask Select a filter suitable for the con and vapours and particles [Type (149°F)].	ion equipment suitable for the eeting relevant legislation. e equipment suppliers. e suitable, select an and filter. nbination of organic gases
Hand protection		
Remarks	: Where hand contact with the pro gloves approved to relevant stan US: F739) made from the followi suitable chemical protection. PV gloves Suitability and durability of usage, e.g. frequency and durati resistance of glove material, dex from glove suppliers. Contamina replaced. Personal hygiene is a l care. Gloves must only be worn gloves, hands should be washed Application of a non-perfumed m	dards (e.g. Europe: EN374, ng materials may provide C, neoprene or nitrile rubber of a glove is dependent on on of contact, chemical terity. Always seek advice ted gloves should be key element of effective han on clean hands. After using and dried thoroughly.
	For continuous contact we recombreakthrough time of more than a for > 480 minutes where suitable short-term/splash protection we have not be available and in this time maybe acceptable so long a and replacement regimes are fol a good predictor of glove resistand dependent on the exact composibility of the thickness should be typicated by the glove make an and replacement regimes are fol a good predictor of glove resistant dependent on the glove make and the glove thickness should be typicated by the glove make and the gl	240 minutes with preference e gloves can be identified. For recommend the same but fering this level of protection case a lower breakthrough as appropriate maintenance lowed. Glove thickness is no nce to a chemical as it is ition of the glove material. ally greater than 0.35 mm
Eye protection	: If material is handled such that it protective eyewear is recommen	
Skin and body protection	: Skin protection is not ordinarily re work clothes. It is good practice to wear chemi	
Thermal hazards	: Not applicable	
Environmental exposure c	ontrols	
General advice	: Take appropriate measures to fur relevant environmental protection contamination of the environmer Section 6. If necessary, prevent being discharged to waste water	n legislation. Avoid It by following advice given i undissolved material from

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	treated in a municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.	
SECTION 9. PHYSICAL AND CHE	MICAL PROPERTIES	
Appearance	: Semi-solid at room temperatur	e.
Colour	: light brown	
Odour	: Slight hydrocarbon	
Odour Threshold	: Data not available	
рH	: Not applicable	
Dropping point	: 180 °C / 356 °F Method: IP 396	
Melting / freezing point	Not applicable	
Initial boiling point and boiling range	: Data not available	
Flash point	: Not applicable	
Evaporation rate	: Data not available	
Flammability (solid, gas)	: Not applicable	
Flammability (liquids)	: Not classified as flammable bu	t will burn.
Upper explosion limit	: Typical 10 %(V)	
Lower explosion limit	: Typical 1 %(V)	
Vapour pressure	: < 0.5 Pa (20 °C / 68 °F) estimated value(s)	
Relative vapour density	: > 1estimated value(s)	
Relative density	: 0.900 (15 °C / 59 °F)	
Density	: 900 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified	
Solubility(ies)		
Water solubility	: negligible	
Solubility in other solvents	: Data not available	
Partition coefficient: n- octanol/water	: log Pow: > 6 (based on information on simila	ar products)

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Auto-ignition temperature	: > 320 °C / 608 °F	
Decomposition temperature	: Data not available	
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: 11 mm2/s (100 °C / 212 °F) Method: ASTM D445	
	100 mm2/s (40.0 °C / 104.0 °F) Method: ASTM D445	
Explosive properties	: Classification Code: Not classified	
Oxidizing properties	: Data not available	
Surface tension	: Data not available	
Conductivity	: This material is not expected to be a s	static accumulator.
Particle size	: Data not available	

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Chemical stability	: Stable.
Possibility of hazardous reactions	: Reacts with strong oxidising agents.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidising agents.
Hazardous decomposition products	: No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	the to the d	nation given is based on data on the components and oxicology of similar products.Unless indicated otherwise, ata presented is representative of the product as a e, rather than for individual component(s).
Exposure routes	: Skin	and eye contact are the primary routes of exposure

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	although exposure may occur foll	owing accidental ingestion.
Acute toxicity		
Product:		
Acute oral toxicity	: LD50 rat: > 5,000 mg/kg Remarks: Low toxicity Based on available data, the clas	sification criteria are not met.
Acute inhalation toxicity	: Remarks: Based on available dat are not met.	a, the classification criteria
Acute dermal toxicity	: LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity Based on available data, the clas	sification criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Remarks: Not a skin sensitiser. Based on available data, the classification criteria are not met.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skin-

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painting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Material	GHS/CLP Carcinogenicity Classification
Highly refined mineral oil	No carcinogenicity classification.

Reproductive toxicity

Product:

Remarks: Based on available data, the classification criteria are not met., Not a developmental toxicant., Does not impair fertility.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment : Ecotoxicological data have not been determined specifically

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	for this product. Information given is based on a ki and the ecotoxicology of similar p Unless indicated otherwise, the da representative of the product as a individual component(s).	roducts. ata presented is
Ecotoxicity		
Product:		
Toxicity to fish (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the class	sification criteria are not met.
Toxicity to crustacean (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the class	sification criteria are not met.
Toxicity to algae/aquatic plants (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the class	sification criteria are not met.
Toxicity to fish (Chronic toxicity)	: Remarks: Based on available data are not met.	a, the classification criteria
Toxicity to crustacean (Chronic toxicity)	: Remarks: Based on available data are not met.	a, the classification criteria
Toxicity to microorganisms (Acute toxicity)	: Remarks: Based on available data are not met.	a, the classification criteria
Persistence and degradability		
Product:		
Biodegradability	: Remarks: Not readily biodegradal inherently biodegradable, but con persist in the environment.	
Bioaccumulative potential		
Product:		
Bioaccumulation	: Remarks: Contains components v bioaccumulate.	with the potential to
Partition coefficient: n- octanol/water	: log Pow: > 6Remarks: (based on products)	information on similar
Mobility in soil		
Product:		

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	it enters soil, it will adsorb to soil particles and will not be mobile. Remarks: Floats on water.	
Other adverse effects		
no data available <u>Product:</u>		
Additional ecological information	 Does not have ozone depletion potent ozone creation potential or global warn is a mixture of non-volatile component released to air in any significant quant conditions of use. Poorly soluble mixture., Causes physic organisms. Mineral oil does not cause chronic tox organisms at concentrations less than 	ming potential., Product ts, which will not be tities under normal cal fouling of aquatic icity to aquatic

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water courses. Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
	MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.
Contaminated packaging	: Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local legislation Remarks	 Disposal should be in accordance with applicable regional, national, and local laws and regulations.

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SECTION 14. TRANSPORT INFORMATION

National Regulations

ADG

Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code Not regulated as a dange

Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks

: Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform : No poison schedule number allocated Scheduling of Medicines and Poisons

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011).

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Other international regulations

The components of this product are reported in the following inventories:

TSCA	:	All components listed.
AIIC	:	Listed introduction

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SECTION 16. OTHER INFORMATION

Full text of H-Statements

H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
Full text of other	abbreviations
Acute Tox.	Acute toxicity
Aquatic Acute	Short-term (acute) aquatic hazard

Aquatic Acute	Short-term (acute) aquatic hazard
Aquatic Chronic	Long-term (chronic) aquatic hazard
Eye Irrit.	Eye irritation
Repr.	Reproductive toxicity
Skin Corr.	Skin corrosion
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitisation

Abbreviations and Acronyms

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil: ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System: GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance: PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG -Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations

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Version 4.6Revision Date 21.03.2023Print Date 22.03.2023Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very
Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date of preparation or review : 21.03.2023

Further information

Other information : A vertical bar (|) in the left margin indicates an amendment from the previous version.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

AU / EN

Shell Gadus S2 V100 3

/ersion 4.9	Revision Date 21.03.2023	Print Date 22.03.202
ECTION 1. PRODUCT AND CO	OMPANY IDENTIFICATION	
Product name	: Shell Gadus S2 V100 3	
Product code	: 001D8464	
Manufacturer or supplier's	s details	
Supplier	: Viva Energy Australia Pty Ltd (Formerly: The Shell Company o (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia	of Australia)
Telephone Telefax	: +61 (0)3 8823 4444 : +61 (0)3 8823 4800	
Emergency telephone number	: 1800 651 818 (Australia). ; POIS CENTRE: 13 11 26 (Australia).	SONS INFORMATION
Recommended use of the	chemical and restrictions on use	
Recommended use	: Automotive and industrial grease	9.
ECTION 2. HAZARDS IDENTI	FICATION	
GHS Classification		

Based on available data this substance / mixture does not meet the classification criteria.

GHS label elements	
Hazard pictograms	: No Hazard Symbol required
Signal word	: No signal word
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Precautionary statements	: Prevention: No precautionary phrases. Response: No precautionary phrases. Storage:

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Version 4.9

Revision Date 21.03.2023 No precautionary phrases. Print Date 22.03.2023

Disposal:

No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Alkaryl amine	68411-46-1	Repr.2; H361	0.1 - 0.9
Zinc naphthenate	12001-85-3	Skin Sens.1B; H317 Eye Irrit.2; H319 Aquatic Chronic2; H411	0.1 - 0.9
Triazole derivative	91273-04-0	Skin Corr.1B; H314 Skin Sens.1A; H317 Aquatic Acute2; H401 Aquatic Chronic2; H411	0.01 - 0.09
Alkyl thiadiazole	13539-13-4	Skin Irrit.2; H315 Skin Sens.1A; H317 Acute Tox.4; H332 Aquatic Chronic4; H413	0.01 - 0.09

Hazardous components

For explanation of abbreviations see section 16.

:

SECTION 4. FIRST-AID MEASURES

If inhaled

No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.

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: Remove contaminated clothing water and follow by washing w If persistent irritation occurs, ol	ith soap if available.
When using high pressure equ under the skin can occur. If hig casualty should be sent immed for symptoms to develop. Obtain medical attention even wounds.	h pressure injuries occur, the liately to a hospital. Do not wait
 Flush eye with copious quantiti Remove contact lenses, if pres rinsing. If persistent irritation occurs, ol 	ent and easy to do. Continue
: In general no treatment is nece are swallowed, however, get m	
 Oil acne/folliculitis signs and sy of black pustules and spots on Ingestion may result in nausea 	the skin of exposed areas.
Local necrosis is evidenced by tissue damage a few hours foll	
: When administering first aid, en appropriate personal protective incident, injury and surrounding	e equipment according to the
: Treat symptomatically.	
determine the extent of involve anaesthetics or hot soaks shou can contribute to swelling, vaso surgical decompression, debrid foreign material should be perf	id therapy, to minimise tissue all and do not reflect the damage, surgical exploration to ment may be necessary. Local all be avoided because they ospasm and ischaemia. Prompt dement and evacuation of ormed under general
	 Remove contaminated clothing water and follow by washing wilf persistent irritation occurs, of When using high pressure equiunder the skin can occur. If hig casualty should be sent immed for symptoms to develop. Obtain medical attention even wounds. Flush eye with copious quantities Remove contact lenses, if pressing. If persistent irritation occurs, of In general no treatment is necessare swallowed, however, get missing. Oil acne/folliculitis signs and sy of black pustules and spots on Ingestion may result in nausea Local necrosis is evidenced by tissue damage a few hours foll When administering first aid, evaluation and possibly stero damage and loss of function. Because entry wounds are smisseriousness of the underlying of determine the extent of involve anaesthetics or hot soaks shou can contribute to swelling, vaso surgical decompression, debrid

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.

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Specific hazards during firefighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).
Hazchem Code	:	NONE
SECTION 6. ACCIDENTAL RELEA	\SE	E MEASURES
Personal precautions, protective equipment and emergency procedures	:	Avoid contact with skin and eyes.
Environmental precautions	:	Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Methods and materials for containment and cleaning up	:	Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Additional advice	:	For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.

SECTION 7. HANDLING AND STORAGE

General Precautions	 Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Advice on safe handling	Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

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Version 4.9	Revision Date 21.03.2023 Properly dispose of any contaminated ra materials in order to prevent fires.	Print Date 22.03.2023 ags or cleaning
Avoidance of contact :	Strong oxidising agents.	
Storage		
Other data :	Keep container tightly closed and in a co place. Use properly labeled and closable conta	
	Store at ambient temperature.	
Packaging material :	Suitable material: For containers or cont steel or high density polyethylene. Unsuitable material: PVC.	ainer linings, use mild
Container Advice :	Polyethylene containers should not be e temperatures because of possible risk o	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	Australia. Workplace Exposure Standards for Airborne Contaminant s.
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

Components with workplace control parameters

Biological occupational exposure limits

Biological Limit Values (BLV) have not been established for this material.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytica I http://www.cdc.gov/niosh/ Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical I http://www.osha.gov/ Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Si http://www.nse.gov.uk/ Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accuei Engineering measures : The level of protection and types of controls necessar vary depending upon potential exposure conditions. Sc controls based on a risk assessment of local circumst Appropriate measures include: Adequate ventilation to control airborne concentration Where material is heated, sprayed or mist formed, the greater potential for airborne concentrations to be ger General Information: Define procedures for safe handling and maintenance controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with product. Ensure appropriate selection, testing and maintenance equipment local exhaust ventilation. Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending dispos: subsequent recycle. Always observe good personal hygien measures, su washing hands after handling the material and before drinking, and/or smoking. Routinely wash work clothi protective equipment to	ľ	Revision Date 21.03.2023 Print Date 22.03.2
Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical I http://www.osha.gov/ Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Si http://www.hse.gov.uk/ Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.inse.gov.uk/ Institut National de Recherche et de Securité, (INRS), France http://www.insr.fr/accuei Engineering measures : The level of protection and types of controls necessar vary depending upon potential exposure conditions. S controls based on a risk assessment of local circumst Appropriate measures include: Adequate ventilation to control airborne concentration Where material is heated, sprayed or mist formed, the greater potential for airborne concentrations to be ger General Information: Define procedures for safe handling and maintenance controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with product. Ensure appropriate selection, testing and maintenance equipment used to control exposure, e.g. personal pri equipment, local exhaust ventilation. Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending dispos: subsequent recycle. Always observe good personal hygiene measures, su washing hands after handling Rotware that cannot be cle Practice good housekeeping. Due to the product's semi-solid consistency, generation mists and dusts is unlikely to occur. Personal protective equipment Protective measures	nstitute of Occupational Sa	
http://www.osha.gov/ Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Si http://www.dguv.de/inhalt/index.jsp L'Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accuei Engineering measures : The level of protection and types of controls necessar vary depending upon potential exposure conditions. S controls based on a risk assessment of local circumst Appropriate measures include: Adequate ventilation to control airborne concentration Where material is heated, sprayed or mist formed, the greater potential for airborne concentrations to be ger General Information: Define procedures for safe handling and maintenance controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with product. Ensure appropriate selection, testing and maintenance equipment, local exhaust ventilation. Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending dispos. subsequent recycle. Always observe good personal hygiene measures, su washing hands after handling and before drinking, and/or smoking. Routinely wash work clothi protective equipment to remove contaminants. Disca contaminated clothing and doxtwar that cannot be cl Practice good housekeeping. Due to the product's semi-solid consistency, generative mists and dusts is unlikely to occur. Personal protective equipment Protective measures		ministration (OOLIA), LICA, Compliant and Appletical Mathe
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mists and dusts is unlikely to occur. Personal protective equipment Protective measures	С	Due to the product's semi-solid consistency, generation of
Protective measures		
	protective equipment	
	e measures	
Personal protective equipment (PPE) should meet recommended national standards. Cl PPE suppliers.		E) should meet recommended national standards. Check

Respiratory protection	 No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne 	

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	concentrations to a level which is health, select respiratory protect specific conditions of use and m Check with respiratory protective Where air-filtering respirators are appropriate combination of mask Select a filter suitable for the cor and vapours and particles [Type (149°F)].	ion equipment suitable for the eeting relevant legislation. e equipment suppliers. e suitable, select an and filter. nbination of organic gases
Hand protection		
Remarks	: Where hand contact with the pro- gloves approved to relevant star US: F739) made from the following suitable chemical protection. PV gloves Suitability and durability of usage, e.g. frequency and duration resistance of glove material, dex from glove suppliers. Contaminant replaced. Personal hygiene is a care. Gloves must only be worn gloves, hands should be washed Application of a non-perfumed model.	ndards (e.g. Europe: EN374, ing materials may provide C, neoprene or nitrile rubber of a glove is dependent on ion of contact, chemical tterity. Always seek advice ited gloves should be key element of effective har on clean hands. After using d and dried thoroughly.
	For continuous contact we record breakthrough time of more than for > 480 minutes where suitable short-term/splash protection we recognize that suitable gloves of may not be available and in this time maybe acceptable so long a and replacement regimes are for a good predictor of glove resistant dependent on the exact compost Glove thickness should be typication depending on the glove make ar	240 minutes with preference e gloves can be identified. For recommend the same but fering this level of protection case a lower breakthrough as appropriate maintenance llowed. Glove thickness is nonce to a chemical as it is ition of the glove material. ally greater than 0.35 mm
Eye protection	: If material is handled such that it protective eyewear is recommen	
Skin and body protection	: Skin protection is not ordinarily r work clothes. It is good practice to wear chemi	
Thermal hazards	: Not applicable	
Environmental exposure c	ontrols	
General advice	 Take appropriate measures to furelevant environmental protection contamination of the environment Section 6. If necessary, prevent being discharged to waste water 	n legislation. Avoid nt by following advice given undissolved material from

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	treated in a municipal or indust before discharge to surface wa Local guidelines on emission li must be observed for the disch vapour.	mits for volatile substances
SECTION 9. PHYSICAL AND CHE	MICAL PROPERTIES	
Appearance	: Semi-solid at room temperature	e.
Colour	: light brown	
Odour	: Slight hydrocarbon	
Odour Threshold	: Data not available	
pН	: Not applicable	
Dropping point	: 180 °C / 356 °F Method: IP 396	
Melting / freezing point	Not applicable	
Initial boiling point and boiling range	: Data not available	
Flash point	: Not applicable	
Evaporation rate	: Data not available	
Flammability (solid, gas)	: Not applicable	
Flammability (liquids)	: Not classified as flammable bu	t will burn.
Upper explosion limit	: Typical 10 %(V)	
Lower explosion limit	: Typical 1 %(V)	
Vapour pressure	: < 0.5 Pa (20 °C / 68 °F) estimated value(s)	
Relative vapour density	: > 1estimated value(s)	
Relative density	: 0.900 (15 °C / 59 °F)	
Density	: 900 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified	
Solubility(ies)		
Water solubility	: negligible	
Solubility in other solvents	: Data not available	
Partition coefficient: n- octanol/water	: log Pow: > 6 (based on information on simila	ar products)

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Auto-ignition temperature	: > 320 °C / 608 °F	
Decomposition temperature	: Data not available	
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: Not applicable	
Explosive properties	: Classification Code: Not classified	
Oxidizing properties	: Data not available	
Conductivity	: This material is not expected to be a s	static accumulator.
Particle size	: Data not available	

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Chemical stability	:	Stable.
Possibility of hazardous reactions	:	Reacts with strong oxidising agents.
Conditions to avoid	:	Extremes of temperature and direct sunlight.
Incompatible materials	:	Strong oxidising agents.
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	: LD50 rat: > 5,000 mg/kg Remarks: Low toxicity

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	Based on available data, the class	Based on available data, the classification criteria are not met.	
Acute inhalation toxicity	: Remarks: Based on available data are not met.	, the classification criteria	
Acute dermal toxicity	: LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity Based on available data, the class	ification criteria are not met.	

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Remarks: Not a skin sensitiser. Based on available data, the classification criteria are not met.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Material	GHS/CLP Carcinogenicity Classification
Highly refined mineral oil	No carcinogenicity classification.

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Reproductive toxicity

Product:

Remarks: Based on available data, the classification criteria are not met., Not a developmental toxicant., Does not impair fertility.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment :	Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
------------------------	---

Version 4.9	Revision Date 21.03.2023	Print Date 22.03.2023
Ecotoxicity		
Product:		
Toxicity to fish (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/ Practically non toxic: Based on available data, the cla	
Toxicity to crustacean (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/ Practically non toxic: Based on available data, the cla	
Toxicity to algae/aquatic plants (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/ Practically non toxic: Based on available data, the cla	
Toxicity to fish (Chronic toxicity)	: Remarks: Based on available da are not met.	ata, the classification criteria
Toxicity to crustacean (Chronic toxicity)	: Remarks: Based on available da are not met.	ata, the classification criteria
Toxicity to microorganisms (Acute toxicity)	: Remarks: Based on available da are not met.	ata, the classification criteria
Persistence and degradability		
Product:		
Biodegradability	: Remarks: Not readily biodegrad inherently biodegradable, but co persist in the environment.	
Bioaccumulative potential		
Product:		
Bioaccumulation	: Remarks: Contains components bioaccumulate.	with the potential to
Partition coefficient: n- octanol/water	: log Pow: > 6Remarks: (based o products)	n information on similar
Mobility in soil		
Product:		
Mobility	 Remarks: Semi-solid under mos it enters soil, it will adsorb to soi mobile. Remarks: Floats on water. 	
Other adverse effects		
no data available <u>Product:</u>		
12 / 16		800001006646 Al

Version 4.9	Revision Date 21.03.2023	Print Date 22.03.2023
Additional ecological information	 Does not have ozone depletion por ozone creation potential or global is a mixture of non-volatile comporeleased to air in any significant q conditions of use. Poorly soluble mixture., Causes porganisms. Mineral oil does not cause chronic organisms at concentrations less 	warming potential., Product nents, which will not be uantities under normal hysical fouling of aquatic toxicity to aquatic

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water courses. Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
	MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.
Contaminated packaging	: Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local legislation Remarks	 Disposal should be in accordance with applicable regional, national, and local laws and regulations.

SECTION 14. TRANSPORT INFORMATION

National Regulations

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Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks

: Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform : No poison schedule number allocated Scheduling of Medicines and Poisons

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011).

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Other international regulations

The components of this product are reported in the following inventories:

TSCA	: All components listed.
AIIC	: Listed introduction

SECTION 16. OTHER INFORMATION

Full text of H-Statements

H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

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H317	May cause an allergic skin reaction.	
H319	Causes serious eye irritation.	
H332	Harmful if inhaled.	
H361	Suspected of damaging fertility or the unborn	child.
H401	Toxic to aquatic life.	
H411	Toxic to aquatic life with long lasting effects.	
H413	May cause long lasting harmful effects to aqu	latic life.
Full text of other abb	previations	
Acute Tox.	Acute toxicity	
Aquatic Acute	Short-term (acute) aquatic hazard	
Aquatic Chronic	Long-term (chronic) aquatic hazard	
Eye Irrit.	Eye irritation	
Repr.	Reproductive toxicity	
Skin Corr.	Skin corrosion	
Skin Irrit.	Skin irritation	
Skin Sens.	Skin sensitisation	

Abbreviations and Acronyms

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date of preparation or review : 21.03.2023

Further information

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Other information	: A vertical bar () in the left margin in from the previous version.	ndicates an amendment

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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Shell Gadus S2 V220 00

Version 3.6	Revision Date 14.10.2022	Print Date 28.10.2022
SECTION 1. PRODUCT AND COMP	ANY IDENTIFICATION	
Product name :	Shell Gadus S2 V220 00	
Product code :	001D8449	
Manufacturer or supplier's det	ails	
Supplier :	Viva Energy Australia Pty Ltd (Formerly: The Shell Company of Aust (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia	ralia)
•	+61 (0)3 8823 4444 : +61 (0)3 8823 4800	
Emergency telephone number	: 1800 651 818 (Australia). ; POISONS CENTRE: 13 11 26 (Australia).	INFORMATION
Recommended use of the cher	nical and restrictions on use	
	Automotive and industrial grease.	
	, i i i i i i i i i i i i i i i i i i i	
SECTION 2. HAZARDS IDENTIFICA	TION	
GHS Classification		

Based on available data this substance / mixture does not meet the classification criteria.

GHS label elements	
Hazard pictograms	: No Hazard Symbol required
Signal word	: No signal word
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Precautionary statements	: Prevention: No precautionary phrases. Response: No precautionary phrases. Storage:

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Revision Date 14.10.2022 No precautionary phrases. Print Date 28.10.2022

Disposal:

No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Bismuth Naphthenate	85736-59-0	Skin Sens.1B; H317 Eye Irrit.2; H319	0.1 - 0.99
Naphthenic acid	1338-24-5	Skin Irrit.2; H315 Skin Sens.1; H317 Eye Irrit.2; H319	0.1 - 0.99
Zinc naphthenate	12001-85-3	Skin Sens.1B; H317 Eye Irrit.2; H319 Aquatic Chronic2; H411	0.1 - 0.99
Alkyl thiadiazole	13539-13-4	Skin Irrit.2; H315 Skin Sens.1A; H317 Acute Tox.4; H332 Aquatic Chronic4; H413	0 - < 0.09

Hazardous components

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASURES

If inhaled	 No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
In case of skin contact	: Remove contaminated clothing. Flush exposed area with

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		water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.	
	When using high pressure equip under the skin can occur. If high casualty should be sent immedia for symptoms to develop. Obtain medical attention even in wounds.	pressure injuries occur, the ately to a hospital. Do not wait	
In case of eye contact	 Flush eye with copious quantitie Remove contact lenses, if prese rinsing. If persistent irritation occurs, obt 	ent and easy to do. Continue	
If swallowed	: In general no treatment is neces are swallowed, however, get me		
Most important symptoms and effects, both acute and delayed	 Oil acne/folliculitis signs and syr of black pustules and spots on t Ingestion may result in nausea, 	he skin of exposed areas. vomiting and/or diarrhoea.	
	Local necrosis is evidenced by on tissue damage a few hours follo		
Protection of first-aiders	: When administering first aid, en appropriate personal protective incident, injury and surroundings	equipment according to the	
Notes to physician	: Treat symptomatically.		
	High pressure injection injuries a intervention and possibly steroid damage and loss of function. Because entry wounds are sma seriousness of the underlying da determine the extent of involven anaesthetics or hot soaks shoul can contribute to swelling, vasos surgical decompression, debride foreign material should be perfo anaesthetics, and wide explorat	I therapy, to minimise tissue II and do not reflect the amage, surgical exploration to nent may be necessary. Local d be avoided because they spasm and ischaemia. Prompt ement and evacuation of rmed under general	

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	: Do not use water in a jet.
Specific hazards during firefighting	: Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and

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	Carbo occur	s (smoke). on monoxide may be evolved if s. entified organic and inorganic co	
Specific extinguishing methods	: Use e circur	extinguishing measures that are nstances and the surrounding e	appropriate to local environment.
Special protective equipment for firefighters	glove large Breat a con	er protective equipment includin s are to be worn; chemical resis contact with spilled product is e hing Apparatus must be worn w fined space. Select fire fighter's ant Standards (e.g. Europe: EN	stant suit is indicated if expected. Self-Contained when approaching a fire in s clothing approved to
Hazchem Code	: NON	Ξ	
SECTION 6. ACCIDENTAL RELEA	SE MEA	SURES	
Personal precautions, protective equipment and	: Avoid	contact with skin and eyes.	
emergency procedures Environmental precautions	conta	appropriate containment to avoid mination. Prevent from spreadin es or rivers by using sand, earth ers.	ng or entering drains,
Methods and materials for containment and cleaning up		ent from spreading or entering in by using sand, earth, or other a	
Additional advice	see S For g	uidance on selection of persona ection 8 of this Safety Data Sho uidance on disposal of spilled n afety Data Sheet.	eet.
SECTION 7. HANDLING AND STO	RAGE		
General Precautions	· Use l	ocal exhaust ventilation if there	is risk of inhalation of

General Precautions	 Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Advice on safe handling	 Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.

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Avoidance of contact	: Strong oxidising agents.	
Storage		
Other data	: Keep container tightly closed and in place. Use properly labeled and closable c	
	Store at ambient temperature.	
Packaging material	: Suitable material: For containers or steel or high density polyethylene. Unsuitable material: PVC.	container linings, use mild
Container Advice	: Polyethylene containers should not temperatures because of possible r	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	Australia. Workplace Exposure Standards for Airborne Contaminant s.
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

Components with workplace control parameters

Biological occupational exposure limits

Biological Limit Values (BLV) have not been established for this material.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and

samples analysed by an accredited laboratory. Examples of sources of recommended exposure measurement methods are given below or

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

rsion 3.6	Revision Date 14.10.2022	Print Date 28.10.2022
	Administration (OSHA), USA: Sampli	
Health and Safety Executive (HS	E), UK: Methods for the Determination	on of Hazardous Substance
	en Gesetzlichen Unfallversicherung	(IFA), Germany
http://www.dguv.de/inhalt/index.js L'Institut National de Recherche	sp et de Securité, (INRS), France http://	www.inrs.fr/accueil
	·····	
Engineering measures :	The level of protection and types or vary depending upon potential exp controls based on a risk assessme Appropriate measures include: Adequate ventilation to control airb	osure conditions. Select nt of local circumstances.
	Where material is heated, sprayed greater potential for airborne conce	
	General Information: Define procedures for safe handling controls.	g and maintenance of
	Educate and train workers in the harmonic measures relevant to normal activit product.	
	Ensure appropriate selection, testir equipment used to control exposur equipment, local exhaust ventilation	e, e.g. personal protective
	Drain down system prior to equipm maintenance.	
	Retain drain downs in sealed stora subsequent recycle.	ge pending disposal or
	Always observe good personal hyg washing hands after handling the n drinking, and/or smoking. Routinel protective equipment to remove co contaminated clothing and footwea Practice good housekeeping.	naterial and before eating, y wash work clothing and ntaminants. Discard
	Due to the product's semi-solid cor mists and dusts is unlikely to occur	
Personal protective equipment	:	
Protective measures		
Personal protective equipment (F PPE suppliers.	PPE) should meet recommended nat	ional standards. Check with

Respiratory protection	 No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the
	concentrations to a level which is adequate to protect worker

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	specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65 (149°F)].
Hand protection	
Remarks	 Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374 US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubbe gloves Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective had care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. F short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is n a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model.
Eye protection	 If material is handled such that it could be splashed into eye protective eyewear is recommended.
Skin and body protection	 Skin protection is not ordinarily required beyond standard work clothes. It is good practice to wear chemical resistant gloves.
Thermal hazards	: Not applicable
Environmental exposure c	ontrols
General advice	: Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given Section 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment pla before discharge to surface water.

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	ocal guidelines on emission limits for vol nust be observed for the discharge of ext apour.	
SECTION 9. PHYSICAL AND CHE	AL PROPERTIES	
Appearance	emi-solid at ambient temperature.	
Colour	rown	
Odour	light hydrocarbon	
Odour Threshold	oata not available	
рН	lot applicable	
Drop point	= 165 °C / >= 329 °F lethod: Unspecified	
Melting point/freezing point	ata not available	
Initial boiling point and boiling range	ata not available	
Flash point	lot applicable	
Evaporation rate	oata not available	
Flammability (solid, gas)	lot applicable	
Flammability (liquids)	lot classified as flammable but will burn.	
Upper explosion limit	ypical 10 %(V)	
Lower explosion limit	ypical 1 %(V)	
Vapour pressure	0.5 Pa (20 °C / 68 °F) stimated value(s)	
Relative vapour density	1estimated value(s)	
Relative density	.000 (15 °C / 59 °F)	
Density	,000 kg/m3 (15.0 °C / 59.0 °F) lethod: Unspecified	
Solubility(ies)		
Water solubility	egligible	
Solubility in other solvents	Data not available	
Partition coefficient: n- octanol/water	og Pow: > 6 based on information on similar products)
Auto-ignition temperature	320 °C / 608 °F	

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Version 3.6 Decomposition temperature	Revision Date 14.10.2022 : Data not available	Print Date 28.10.2022
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: Not applicable	
Explosive properties	: Classification Code: Not classified	
Oxidizing properties	: Data not available	
Conductivity Particle size	: This material is not expected to be a s : Data not available	static accumulator.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Chemical stability	: Stable.
Possibility of hazardous reactions	: Reacts with strong oxidising agents.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidising agents.
Hazardous decomposition products	: No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	 LD50 rat: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the classification criteria are not met.

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Acute inhalation toxicity	: Remarks: Based on available data, the classification criteria are not met.		
Acute dermal toxicity	: LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the class	ification criteria are not met.	

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Remarks: Not a skin sensitiser. Based on available data, the classification criteria are not met.

Components:

Naphthenic acid: Remarks: May cause an allergic skin reaction in sensitive individuals.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

	Material	GHS/CLP Carcinogenicity Classification
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	Highly refined mineral oil	No carcinogenicity classification.	

Reproductive toxicity

Product:

Remarks: Not a developmental toxicant., Does not impair fertility., Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment	 Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for
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Version 3.6	Revision Date 14.10.2022 Print Date 28.10.2022
	individual component(s).
Ecotoxicity	
Product:	
Toxicity to fish (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/I Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to algae/aquatic plants (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to fish (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Toxicity to microorganisms (Acute toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Persistence and degradability	
Product:	
Biodegradability	: Remarks: Not readily biodegradable., Major constituents are inherently biodegradable, but contains components that may persist in the environment.
Bioaccumulative potential	
Product:	
Bioaccumulation	: Remarks: Contains components with the potential to bioaccumulate.
Partition coefficient: n- octanol/water	: log Pow: > 6Remarks: (based on information on similar products)
Mobility in soil	
Product:	
Mobility	 Remarks: Semi-solid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be mobile. Remarks: Floats on water.
Other adverse effects	

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no data available <u>Product:</u>		
Additional ecological information	 Does not have ozone depletion por ozone creation potential or global is a mixture of non-volatile compor released to air in any significant qui conditions of use. Poorly soluble mixture., Causes pli organisms. Mineral oil does not cause chronic organisms at concentrations less to 	warming potential., Product nents, which will not be uantities under normal hysical fouling of aquatic toxicity to aquatic

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues :	 Recover or recycle if possible. It is the responsibility of the waste generator to determine th toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water courses Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand. 	
	MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.	
Contaminated packaging :	Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.	
Local legislation Remarks :	Disposal should be in accordance with applicable regional, national, and local laws and regulations.	

SECTION 14. TRANSPORT INFORMATION

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Version 3.6 National Regulations

ADG

Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks

: Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform : No poison schedule number allocated Scheduling of Medicines and Poisons

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011).

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Other international regulations

The components of this product are reported in the following inventories:

REACH	: Not all components listed.
TSCA	: All components listed.
AIIC	: Listed introduction

SECTION 16. OTHER INFORMATION

Full text of H-Statements

Version 3.6	Revision Date 14.10.2022	Print Date 28.10.2022
H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H319	Causes serious eye irritation.	
H332	Harmful if inhaled.	
H411	Toxic to aquatic life with long lasting effects.	
H413	May cause long lasting harmful effects to aquation	c life.
Full text of other abb	reviations	
Acute Tox.	Acute toxicity	
Aquatic Chronic	Long-term (chronic) aquatic hazard	
Eye Irrit.	Eye irritation	
Skin Irrit.	Skin irritation	
Skin Sens.	Skin sensitisation	

Abbreviations and Acronyms

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG -Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date of preparation or review : 14.10.2022

Further information

Other information

: A vertical bar (|) in the left margin indicates an amendment from the previous version.

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Version 3.6Revision Date 14.10.2022Print Date 28.10.2022The information provided in this Safety Data Sheet is correct to the best of our knowledge,
information and belief at the date of its publication. The information given is designed only as a
guidance for safe handling, use, processing, storage, transportation, disposal and release and is
not to be considered a warranty or quality specification. The information relates only to the
specific material designated and may not be valid for such material used in combination with any
other materials or in any process, unless specified in the text.

AU / EN

Shell Gadus S2 V220 0

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION					
Product name :	Shell Gadus S2 V220 0				
Product code :	001D8448				
Manufacturer or supplier's deta	nils				
Supplier :	Viva Energy Australia Pty Ltd (Formerly: The Shell Company of Aust (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia	ralia)			
	+61 (0)3 8823 4444 +61 (0)3 8823 4800				
Emergency telephone : number	1800 651 818 (Australia). ; POISONS CENTRE: 13 11 26 (Australia).	INFORMATION			
Recommended use of the chen	nical and restrictions on use				
Recommended use :	Automotive and industrial grease.				
SECTION 2. HAZARDS IDENTIFICA	ΓΙΟΝ				
GHS Classification					
Based on available data this subs	stance / mixture does not meet the class	ification criteria.			

GHS label elements	
Hazard pictograms	: No Hazard Symbol required
Signal word	: No signal word
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Precautionary statements	:
	Prevention: No precautionary phrases.
	Response: No precautionary phrases.

Storage:

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Disposal:

No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Chemical name	CAS-No.	Classification	Concentration (%
			w/w)
Bismuth Naphthenate	85736-59-0	Skin Sens.1B; H317	0.1 - 0.99
		Eye Irrit.2; H319	
Zinc naphthenate	12001-85-3	Skin Sens.1B; H317	0.1 - 0.99
		Eye Irrit.2; H319	
		Aquatic Chronic2;	
		H411	
Naphthenic acid	1338-24-5	Skin Irrit.2; H315	0.1 - 0.99
		Skin Sens.1; H317	
		Eye Irrit.2; H319	
Alkyl thiadiazole	13539-13-4	Skin Irrit.2; H315	0 - < 0.09
-		Skin Sens.1A; H317	
		Acute Tox.4; H332	
		Aquatic Chronic4;	
		H413	

Hazardous components

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASURES

lf inhaled	 No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
In case of skin contact	: Remove contaminated clothing. Flush exposed area with

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	water and follow by washing with If persistent irritation occurs, obta	
	When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.	
In case of eye contact	 Flush eye with copious quantities Remove contact lenses, if preser rinsing. If persistent irritation occurs, obtain 	nt and easy to do. Continue
If swallowed	: In general no treatment is necess are swallowed, however, get me	
Most important symptoms and effects, both acute and delayed	 Oil acne/folliculitis signs and sym of black pustules and spots on th Ingestion may result in nausea, y 	e skin of exposed areas.
	Local necrosis is evidenced by d tissue damage a few hours follow	
Protection of first-aiders	: When administering first aid, ens appropriate personal protective e incident, injury and surroundings	equipment according to the
Notes to physician	: Treat symptomatically.	
	High pressure injection injuries re intervention and possibly steroid damage and loss of function. Because entry wounds are small seriousness of the underlying da determine the extent of involvem anaesthetics or hot soaks should can contribute to swelling, vasos surgical decompression, debride foreign material should be perfor anaesthetics, and wide exploration	therapy, to minimise tissue and do not reflect the mage, surgical exploration to ent may be necessary. Local I be avoided because they pasm and ischaemia. Prompt ment and evacuation of med under general

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.
Specific hazards during firefighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and

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	gases (smoke). Carbon monoxide may be evolve occurs. Unidentified organic and inorgani	
Specific extinguishing methods	: Use extinguishing measures that circumstances and the surroundir	
Special protective equipment for firefighters	: Proper protective equipment inclu gloves are to be worn; chemical r large contact with spilled product Breathing Apparatus must be wo a confined space. Select fire fight relevant Standards (e.g. Europe:	resistant suit is indicated if is expected. Self-Contained rn when approaching a fire in ter's clothing approved to
Hazchem Code	: NONE	
SECTION 6. ACCIDENTAL RELEA	ASE MEASURES	
Personal precautions, protective equipment and emergency procedures	: Avoid contact with skin and eyes.	
Environmental precautions	: Use appropriate containment to a contamination. Prevent from spre ditches or rivers by using sand, e barriers.	eading or entering drains,
Methods and materials for containment and cleaning up	: Prevent from spreading or enterir rivers by using sand, earth, or oth	
Additional advice	: For guidance on selection of pers see Section 8 of this Safety Data For guidance on disposal of spille this Safety Data Sheet.	Sheet.
SECTION 7. HANDLING AND STO	DRAGE	
General Precautions	: Use local exhaust ventilation if the	ere is risk of inhalation of

	vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Advice on safe handling	 Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.

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Avoidance of contact	: Strong oxidising agents.	
Storage		
Other data	: Keep container tightly closed and in place. Use properly labeled and closable	
	Store at ambient temperature.	
Packaging material	: Suitable material: For containers or steel or high density polyethylene. Unsuitable material: PVC.	⁻ container linings, use mild
Container Advice	: Polyethylene containers should not temperatures because of possible	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	Australia. Workplace Exposure Standards for Airborne Contaminant s.
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

Components with workplace control parameters

Biological occupational exposure limits

Biological Limit Values (BLV) have not been established for this material.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and

samples analysed by an accredited laboratory. Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

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Occupational Safety and Hea http://www.osha.gov/	alth Administration (OSHA), USA: Sampl	ing and Analytical Methods
Health and Safety Executive http://www.hse.gov.uk/	(HSE), UK: Methods for the Determinati	
http://www.dguv.de/inhalt/ind	tschen Gesetzlichen Unfallversicherung ex.jsp	(IFA), Germany
L'Institut National de Rechero	che et de Securité, (INRS), France http://	/www.inrs.fr/accueil
Engineering measures	: The level of protection and types o vary depending upon potential exp controls based on a risk assessme Appropriate measures include:	osure conditions. Select
	Adequate ventilation to control airb	oorne concentrations.
	Where material is heated, sprayed greater potential for airborne conce	
	General Information: Define procedures for safe handlin controls.	g and maintenance of
	Educate and train workers in the h measures relevant to normal activi product.	
	Ensure appropriate selection, testi equipment used to control exposur equipment, local exhaust ventilatio	re, e.g. personal protective
	Drain down system prior to equipm maintenance.	
	Retain drain downs in sealed stora subsequent recycle.	age pending disposal or
	Always observe good personal hyg washing hands after handling the r drinking, and/or smoking. Routine protective equipment to remove co contaminated clothing and footwea Practice good housekeeping.	naterial and before eating ly wash work clothing and ontaminants. Discard
	Due to the product's semi-solid con mists and dusts is unlikely to occur	
Personal protective equipm	nent	
Protective measures		
Personal protective equipme	nt (PPF) should meet recommended na	tional standards. Check w

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory protection	 No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the
	health, select respiratory protection equipment suitable for the

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	specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65° (149°F)].
Hand protection	
Remarks	: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubbe gloves Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective har care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
	For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. F short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protectior may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is n a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model.
Eye protection	: If material is handled such that it could be splashed into eye protective eyewear is recommended.
Skin and body protection	 Skin protection is not ordinarily required beyond standard work clothes. It is good practice to wear chemical resistant gloves.
Thermal hazards	: Not applicable
Environmental exposure c	ontrols
General advice	Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given Section 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment pla before discharge to surface water.

before discharge to surface water.

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	Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.
SECTION 9. PHYSICAL AND CHE	MICAL PROPERTIES
Appearance	: Semi-solid at ambient temperature.
Colour	: brown
Odour	: Slight hydrocarbon
Odour Threshold	: Data not available
рН	: Not applicable
Dropping point	: >= 180 °C / >= 356 °F Method: Unspecified
Melting point/freezing point	Data not available
Initial boiling point and boiling range	: Data not available
Flash point	: Not applicable
Evaporation rate	: Data not available
Flammability (solid, gas)	: Not applicable
Flammability (liquids)	: Not classified as flammable but will burn.
Upper explosion limit	: Typical 10 %(V)
Lower explosion limit	: Typical 1 %(V)
Vapour pressure	: < 0.5 Pa (20 °C / 68 °F) estimated value(s)
Relative vapour density	: > 1estimated value(s)
Density	: 1,000 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified
Solubility(ies)	
Water solubility	: negligible
Solubility in other solvents	: Data not available
Partition coefficient: n- octanol/water	: log Pow: > 6 (based on information on similar products)
Auto-ignition temperature	: > 320 °C / 608 °F
Decomposition temperature	: Data not available

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Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: Not applicable	
Explosive properties	: Classification Code: Not classified	
Oxidizing properties	: Data not available	
Conductivity	: This material is not expected to be a	a static accumulator.
Particle size	: Data not available	

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Chemical stability	: Stable.
Possibility of hazardous reactions	: Reacts with strong oxidising agents.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidising agents.
Hazardous decomposition products	: No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	: LD50 rat: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the classification criteria are not met.
Acute inhalation toxicity	: Remarks: Based on available data, the classification criteria are not met.

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Acute dermal toxicity :	LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the classificati	on criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Remarks: Not a skin sensitiser. Based on available data, the classification criteria are not met.

Components:

Naphthenic acid:

Remarks: May cause an allergic skin reaction in sensitive individuals.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Material	GHS/CLP Carcinogenicity Classification
Highly refined mineral oil	No carcinogenicity classification.

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Reproductive toxicity

Product:

Remarks: Not a developmental toxicant., Does not impair fertility., Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment :	Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
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Version 3.3	Revision Date 23.10.2022	Print Date 24.10.2022
Ecotoxicity Product:		
Toxicity to fish (Acute		
toxicity)	Remarks: LL/EL/IL50 > 100 mg/ Practically non toxic: Based on available data, the cla	
Toxicity to crustacean (Acute toxicity)	Remarks: LL/EL/IL50 > 100 mg/ Practically non toxic: Based on available data, the cla	
Toxicity to algae/aquatic plants (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/ Practically non toxic: Based on available data, the cla	
Toxicity to fish (Chronic toxicity)	: Remarks: Based on available da are not met.	ata, the classification criteria
Toxicity to crustacean (Chronic toxicity)	: Remarks: Based on available da are not met.	ata, the classification criteria
Toxicity to microorganisms (Acute toxicity)	: Remarks: Based on available da are not met.	ata, the classification criteria
Persistence and degradability		
Product:		
Biodegradability	: Remarks: Not readily biodegrad inherently biodegradable, but co persist in the environment.	
Bioaccumulative potential		
Product:		
Bioaccumulation	: Remarks: Contains components bioaccumulate.	s with the potential to
Partition coefficient: n- octanol/water	: log Pow: > 6Remarks: (based o products)	n information on similar
Mobility in soil		
Product:		
Mobility	 Remarks: Semi-solid under mos it enters soil, it will adsorb to soi mobile. Remarks: Floats on water. 	,
Other adverse effects		
no data available <u>Product:</u>		
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Additional ecological information	 Does not have ozone depletion po ozone creation potential or global v is a mixture of non-volatile compor released to air in any significant qu conditions of use. Poorly soluble mixture., Causes ph organisms. Mineral oil does not cause chronic organisms at concentrations less the 	warming potential., Product nents, which will not be nantities under normal nysical fouling of aquatic toxicity to aquatic

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water courses Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
	MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.
Contaminated packaging	: Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local legislation Remarks	: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

SECTION 14. TRANSPORT INFORMATION

National Regulations

Shell Gadus S2 V220 0

Version 3.3 ADG Revision Date 23.10.2022

Print Date 24.10.2022

Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks

: Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform : No poison schedule number allocated Scheduling of Medicines and Poisons

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011).

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Other international regulations

The components of this product are reported in the following inventories:

REACH	: Not all components listed.
TSCA	: All components listed.
AIIC	: Listed introduction

SECTION 16. OTHER INFORMATION

Full text of H-Statements

Version 3.3	Revision Date 23.10.2022	Print Date 24.10.2022	
H317	May cause an allergic skin reaction.		
H319	Causes serious eye irritation.		
H332	Harmful if inhaled.		
H411	Toxic to aquatic life with long lasting effects.		
H413	May cause long lasting harmful effects to aquatic life.		
Full text of other abb	previations		
Acute Tox.	Acute toxicity		
Aquatic Chronic	Long-term (chronic) aquatic hazard		
Eye Irrit.	Eye irritation		
Skin Irrit.	Skin irritation		
Skin Sens.	Skin sensitisation		

Abbreviations and Acronyms

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development: OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG -Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date of preparation or review : 23.10.2022

Further information

Other information

: A vertical bar (|) in the left margin indicates an amendment from the previous version.

Shell Gadus S2 V220 0

Version 3.3Revision Date 23.10.2022Print Date 24.10.2022The information provided in this Safety Data Sheet is correct to the best of our knowledge,
information and belief at the date of its publication. The information given is designed only as a
guidance for safe handling, use, processing, storage, transportation, disposal and release and is
not to be considered a warranty or quality specification. The information relates only to the
specific material designated and may not be valid for such material used in combination with any
other materials or in any process, unless specified in the text.

AU / EN

Shell Gadus S2 V220 1

Version 3.2	Revision Date 23.10.2022	Print Date 24.10.2022
SECTION 1. PRODUCT AND	COMPANY IDENTIFICATION	
Product name	: Shell Gadus S2 V220 1	
Product code	: 001D8450	
Manufacturer or supplier	's details	
Supplier	 Viva Energy Australia Pty Ltd (Formerly: The Shell Company o (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia 	f Australia)
Telephone Telefax	: +61 (0)3 8823 4444 : +61 (0)3 8823 4800	
Emergency telephone number	: 1800 651 818 (Australia). ; POIS CENTRE: 13 11 26 (Australia).	SONS INFORMATION
Recommended use of the	e chemical and restrictions on use	
Recommended use	: Automotive and industrial grease	2.
SECTION 2. HAZARDS IDENT	TFICATION	
GHS Classification		
Based on available data th	is substance / mixture does not meet the	e classification criteria.

GHS label elements	
Hazard pictograms	: No Hazard Symbol required
Signal word	: No signal word
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Precautionary statements	: Brown tions
	Prevention: No precautionary phrases.
	Response: No precautionary phrases.

Storage:

Shell Gadus S2 V220 1

Version 3.2

Revision Date 23.10.2022 No precautionary phrases. Print Date 24.10.2022

Disposal:

No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Chemical name	CAS-No.	Classification	Concentration (%
			w/w)
Bismuth Naphthenate	85736-59-0	Skin Sens.1B; H317	0.1 - < 1
		Eye Irrit.2; H319	
Zinc naphthenate	12001-85-3	Skin Sens.1B; H317	0.1 - 0.9
		Eye Irrit.2; H319	
		Aquatic Chronic2;	
		H411	
Naphthenic acid	1338-24-5	Skin Irrit.2; H315	0.1 - 0.9
		Skin Sens.1; H317	
		Eye Irrit.2; H319	
Alkyl thiadiazole	13539-13-4	Skin Irrit.2; H315	0 - < 0.09
		Skin Sens.1A; H317	
		Acute Tox.4; H332	
		Aquatic Chronic4;	
		H413	

Hazardous components

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASURES

lf inhaled	 No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
In case of skin contact	: Remove contaminated clothing. Flush exposed area with

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	water and follow by washing with If persistent irritation occurs, obta	
	When using high pressure equip under the skin can occur. If high casualty should be sent immedia for symptoms to develop. Obtain medical attention even in wounds.	pressure injuries occur, the tely to a hospital. Do not wait
In case of eye contact	 Flush eye with copious quantities Remove contact lenses, if preser rinsing. If persistent irritation occurs, obtained 	nt and easy to do. Continue
If swallowed	: In general no treatment is necessare swallowed, however, get me	
Most important symptoms and effects, both acute and delayed	 Oil acne/folliculitis signs and sym of black pustules and spots on the Ingestion may result in nausea, y 	e skin of exposed areas.
	Local necrosis is evidenced by d tissue damage a few hours follow	
Protection of first-aiders	: When administering first aid, ens appropriate personal protective e incident, injury and surroundings	equipment according to the
Notes to physician	: Treat symptomatically.	
	High pressure injection injuries re intervention and possibly steroid damage and loss of function. Because entry wounds are small seriousness of the underlying da determine the extent of involvem anaesthetics or hot soaks should can contribute to swelling, vasos surgical decompression, debride foreign material should be perfor anaesthetics, and wide exploration	therapy, to minimise tissue and do not reflect the mage, surgical exploration to ent may be necessary. Local I be avoided because they pasm and ischaemia. Prompt ment and evacuation of med under general

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.
Specific hazards during firefighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and

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		gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs.	
		Unidentified organic and inorganic cor	npounds.
Specific extinguishing methods	:	Use extinguishing measures that are a circumstances and the surrounding en	
Special protective equipment for firefighters	:	Proper protective equipment including gloves are to be worn; chemical resist large contact with spilled product is ex Breathing Apparatus must be worn wh a confined space. Select fire fighter's of relevant Standards (e.g. Europe: EN4	ant suit is indicated if pected. Self-Contained nen approaching a fire in clothing approved to
Hazchem Code	:	NONE	
SECTION 6. ACCIDENTAL RELEA	S	EMEASURES	
Personal precautions, protective equipment and emergency procedures	:	Avoid contact with skin and eyes.	
Environmental precautions	:	Use appropriate containment to avoid contamination. Prevent from spreading ditches or rivers by using sand, earth, barriers.	g or entering drains,
Methods and materials for containment and cleaning up	:	Prevent from spreading or entering int rivers by using sand, earth, or other ap	
Additional advice	:	For guidance on selection of personal see Section 8 of this Safety Data Shee For guidance on disposal of spilled ma this Safety Data Sheet.	et.
SECTION 7. HANDLING AND STO	R	AGE	

General Precautions	 Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Advice on safe handling	 Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.

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Avoidance of contact	: Strong oxidising agents.	
Storage		
Other data	: Keep container tightly closed and i place. Use properly labeled and closable	
	Store at ambient temperature.	
Packaging material	: Suitable material: For containers or steel or high density polyethylene. Unsuitable material: PVC.	r container linings, use mild
Container Advice	: Polyethylene containers should no temperatures because of possible	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	Australia. Workplace Exposure Standards for Airborne Contaminant s.
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

Components with workplace control parameters

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory. Examples of sources of recommended exposure measurement methods are given below or

contact the supplier. Further national methods may be available. National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods

union 2 0	Devision Data 22.40.2022	Drint Data 24 40 2022
ersion 3.2 http://www.cdc.gov/niosh/	Revision Date 23.10.2022	Print Date 24.10.2022
Occupational Safety and Hea	Ith Administration (OSHA), USA: Samp	ling and Analytical Methods
http://www.osha.gov/	(HSE), UK: Methods for the Determinati	ion of Hazardous Substances
http://www.hse.gov.uk/		on of fidzardous Substances
Institut für Arbeitsschutz Deut	schen Gesetzlichen Unfallversicherung	(IFA), Germany
http://www.dguv.de/inhalt/inde L'Institut National de Recherc	ex.jsp he et de Securité, (INRS), France http:/	/www.inrs.fr/accueil
Engineering measures	: The level of protection and types of	
	vary depending upon potential exp controls based on a risk assessme	
	Appropriate measures include:	
	Adequate ventilation to control air	oorne concentrations.
	Where material is heated, sprayed	l or mist formed, there is
	greater potential for airborne conc	entrations to be generated.
	General Information:	
	Define procedures for safe handlir controls.	ng and maintenance of
	Educate and train workers in the h	azards and control
	measures relevant to normal activi product.	
	Ensure appropriate selection, testi	
	equipment used to control exposu equipment, local exhaust ventilation	
	Drain down system prior to equipn	
	maintenance.	
	Retain drain downs in sealed stora subsequent recycle.	age pending disposal or
	Always observe good personal hy	giene measures, such as
	washing hands after handling the	
	drinking, and/or smoking. Routine protective equipment to remove co	
	contaminated clothing and footwea	
	Practice good housekeeping.	
	Due to the product's semi-solid co	
	mists and dusts is unlikely to occu	r.
Personal protective equipm	ent	
Protective measures		
Personal protective equipmer PPE suppliers.	nt (PPE) should meet recommended na	tional standards. Check with

Respiratory protection	:	No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker
		U U

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	health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65' (149°F)].
Hand protection	
Remarks	 Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubbe gloves Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective har care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protectior may not be available and in this case a lower breakthrough
	time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is n a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model.
Eye protection	: If material is handled such that it could be splashed into eye protective eyewear is recommended.
Skin and body protection	 Skin protection is not ordinarily required beyond standard work clothes. It is good practice to wear chemical resistant gloves.
Thermal hazards	: Not applicable
Environmental exposure c	ontrols
General advice	Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given Section 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment pla

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	before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.		
SECTION 9. PHYSICAL AND CHE	MICAL PROPERTIES		
Appearance	: Semi-solid at ambient temperatu	ire.	
Colour	: brown		
Odour	: Slight hydrocarbon		
Odour Threshold	: Data not available		
рН	: Not applicable		
Dropping point	: 180 °C / 356 °F Method: IP 396		
Melting / freezing point	Not applicable		
Initial boiling point and boiling range	: Data not available		
Flash point	: Not applicable		
Evaporation rate	: Data not available		
Flammability (solid, gas)	: Not applicable		
Flammability (liquids)	: Not classified as flammable but v	will burn.	
Upper explosion limit	: Typical 10 %(V)		
Lower explosion limit	: Typical 1 %(V)		
Vapour pressure	: < 0.5 Pa (20 °C / 68 °F) estimated value(s)		
Relative vapour density	: > 1estimated value(s)		
Relative density	: 1.000 (15 °C / 59 °F)		
Density	: 1,000 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified		
Solubility(ies)			
Water solubility	: negligible		
Solubility in other solvents	: Data not available		
Partition coefficient: n- octanol/water	: log Pow: > 6 (based on information on similar	products)	
Auto-ignition temperature	: > 320 °C / 608 °F		

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Decomposition temperature	: Data not available	
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: Not applicable	
Explosive properties	: Classification Code: Not classified	
Oxidizing properties	: Data not available	
Conductivity Particle size	This material is not expected to be a sData not available	static accumulator.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Chemical stability	: Stable.
Possibility of hazardous reactions	: Reacts with strong oxidising agents.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidising agents.
Hazardous decomposition products	: No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	 LD50 rat: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the classification criteria are not met.

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Acute inhalation toxicity	: Remarks: Based on available data, are not met.	the classification criteria
Acute dermal toxicity	: LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the classi	fication criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Remarks: Not a skin sensitiser. Based on available data, the classification criteria are not met.

Components:

Naphthenic acid:

Remarks: May cause an allergic skin reaction in sensitive individuals.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Shell Gadus S2 V220 1

Ver	sion 3.2	Revision Date 23.10.2022	Print Date 24.10.2022	<u>}</u>
	Material	GHS/CLP Carcinogenicity Classification		_
	Highly refined mineral oil	No carcinogenicity classification.		

Reproductive toxicity

Product:

Remarks: Not a developmental toxicant., Does not impair fertility., Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment	: Ecotoxicological data have not been determined specifically
	for this product.
	Information given is based on a knowledge of the components and the ecotoxicology of similar products.
	and the ecoloxicology of similar products.

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	Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Ecotoxicity	
Product:	
Toxicity to fish (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/I Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/I Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to algae/aquatic plants (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to fish (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Toxicity to microorganisms (Acute toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Persistence and degradability	
Product:	
Biodegradability	: Remarks: Not readily biodegradable., Major constituents are inherently biodegradable, but contains components that may persist in the environment.
Bioaccumulative potential	
Product:	
Bioaccumulation	: Remarks: Contains components with the potential to bioaccumulate.
Partition coefficient: n- octanol/water	 log Pow: > 6Remarks: (based on information on similar products)
Mobility in soil	
Product:	
Mobility	 Remarks: Semi-solid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be mobile. Remarks: Floats on water.

Shell Gadus S2 V220 1

Version 3.2 Other adverse effects	Revision Date 23.10.2022	Print Date 24.10.2022
no data available <u>Product:</u>		
Additional ecological information	 Does not have ozone depletion por ozone creation potential or global v is a mixture of non-volatile compor released to air in any significant qu conditions of use. Poorly soluble mixture., Causes ph organisms. Mineral oil does not cause chronic organisms at concentrations less the 	warming potential., Product nents, which will not be nantities under normal nysical fouling of aquatic toxicity to aquatic

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water courses Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
	MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.
Contaminated packaging	: Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local legislation Remarks	: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

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SECTION 14. TRANSPORT INFORMATION

National Regulations

ADG

Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks

: Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform : No poison schedule number allocated Scheduling of Medicines and Poisons

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011). Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Other international regulations

The components of this product are reported in the following inventories:

REACH	: Not all components listed.
TSCA	: All components listed.
AIIC	: Listed introduction

SECTION 16. OTHER INFORMATION

Version 3.2

Revision Date 23.10.2022

Print Date 24.10.2022

Full text of H-Statements

H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H319	Causes serious eye irritation.	
H332	Harmful if inhaled.	
H411	Toxic to aquatic life with long lasting effects.	
H413	May cause long lasting harmful effects to aquatic life.	
Full text of other abbreviations		
Acute Tox	Acute toxicity	

Acute Tox.	Acute toxicity
Aquatic Chronic	Long-term (chronic) aquatic hazard
Eye Irrit.	Eye irritation
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitisation

Abbreviations and Acronyms

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development: OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG -Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date of preparation or review : 23.10.2022

Further information

Other information

: A vertical bar (|) in the left margin indicates an amendment from the previous version.

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Version 3.2

Revision Date 23.10.2022

Print Date 24.10.2022

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

AU / EN

Version 4.5	Revision Date 14.10.2022	Print Date 15.10.2022
SECTION 1. PRODUCT AND C	OMPANY IDENTIFICATION	
Product name	: Shell Gadus S2 V220 2	
Product code	: 001D8451	
Manufacturer or supplier'	s details	
Supplier	 Viva Energy Australia Pty Ltd (Formerly: The Shell Company of (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia 	Australia)
Telephone Telefax	: +61 (0)3 8823 4444 : +61 (0)3 8823 4800	
Emergency telephone number	: 1800 651 818 (Australia). ; POISC CENTRE: 13 11 26 (Australia).	ONS INFORMATION
Recommended use of the	chemical and restrictions on use	
Recommended use	: Automotive and industrial grease.	
SECTION 2. HAZARDS IDENT	FICATION	
GHS Classification		
Based on available data thi	s substance / mixture does not meet the c	classification criteria.

GHS label elements	
Hazard pictograms	: No Hazard Symbol required
Signal word	: No signal word
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Precautionary statements	Prevention: No precautionary phrases. Response: No precautionary phrases. Storage:
	Sluraye.

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Revision Date 14.10.2022 No precautionary phrases. Print Date 15.10.2022

Disposal:

No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Bismuth Naphthenate	85736-59-0	Skin Sens.1B; H317 Eye Irrit.2; H319	0.1 - 0.9
Naphthenic acid	1338-24-5	Skin Irrit.2; H315 Skin Sens.1; H317 Eye Irrit.2; H319	0.1 - 0.9
Zinc naphthenate	12001-85-3	Skin Sens.1B; H317 Eye Irrit.2; H319 Aquatic Chronic2; H411	0 - < 0.9
Alkyl thiadiazole	13539-13-4	Skin Irrit.2; H315 Skin Sens.1A; H317 Acute Tox.4; H332 Aquatic Chronic4; H413	0 - < 0.09

Hazardous components

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASURES

If inhaled	: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
In case of skin contact	: Remove contaminated clothing. Flush exposed area with

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	water and follow by washing with If persistent irritation occurs, obt	
	When using high pressure equip under the skin can occur. If high casualty should be sent immedia for symptoms to develop. Obtain medical attention even in wounds.	pressure injuries occur, the ately to a hospital. Do not wait
In case of eye contact	 Flush eye with copious quantitie Remove contact lenses, if prese rinsing. If persistent irritation occurs, obt 	nt and easy to do. Continue
If swallowed	: In general no treatment is neces are swallowed, however, get me	
Most important symptoms and effects, both acute and delayed	 Oil acne/folliculitis signs and syn of black pustules and spots on the Ingestion may result in nausea, 	he skin of exposed areas.
	Local necrosis is evidenced by c tissue damage a few hours follow	
Protection of first-aiders	: When administering first aid, ens appropriate personal protective incident, injury and surroundings	equipment according to the
Notes to physician	: Treat symptomatically.	
	High pressure injection injuries r intervention and possibly steroid damage and loss of function. Because entry wounds are smal seriousness of the underlying da determine the extent of involver anaesthetics or hot soaks should can contribute to swelling, vasos surgical decompression, debride foreign material should be perfor anaesthetics, and wide explorati	I therapy, to minimise tissue I and do not reflect the amage, surgical exploration to bent may be necessary. Local d be avoided because they spasm and ischaemia. Prompt ement and evacuation of rmed under general

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.
Specific hazards during firefighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and

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	gases (smoke). Carbon monoxide may be evolve occurs.	d if incomplete combustion
	Unidentified organic and inorgani	c compounds.
Specific extinguishing methods	: Use extinguishing measures that circumstances and the surroundir	
Special protective equipment for firefighters	 Proper protective equipment inclugioves are to be worn; chemical relarge contact with spilled product Breathing Apparatus must be word a confined space. Select fire fight relevant Standards (e.g. Europe) 	esistant suit is indicated if is expected. Self-Containe m when approaching a fire er's clothing approved to
Hazchem Code	: NONE	
CTION 6. ACCIDENTAL RELEA Personal precautions, protective equipment and	ASE MEASURES : Avoid contact with skin and eyes.	
emergency procedures		
Environmental precautions	: Use appropriate containment to a contamination. Prevent from spre ditches or rivers by using sand, e barriers.	ading or entering drains,
Methods and materials for containment and cleaning up	: Prevent from spreading or enterir rivers by using sand, earth, or oth	
Additional advice	: For guidance on selection of pers see Section 8 of this Safety Data For guidance on disposal of spille this Safety Data Sheet.	Sheet.
CTION 7. HANDLING AND ST	DRAGE	
General Precautions	: Use local exhaust ventilation if the	ere is risk of inhalation of

	vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Advice on safe handling	 Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.

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Avoidance of contact	: Strong oxidising agents.	
Storage		
Other data	: Keep container tightly closed and i place. Use properly labeled and closable	
	Store at ambient temperature.	
Packaging material	: Suitable material: For containers or steel or high density polyethylene. Unsuitable material: PVC.	r container linings, use mild
Container Advice	: Polyethylene containers should no temperatures because of possible	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	Australia. Workplace Exposure Standards for Airborne Contaminant s.
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

Components with workplace control parameters

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory. Examples of sources of recommended exposure measurement methods are given below or

contact the supplier. Further national methods may be available. National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods

http://www.osha.gov/ Health and Safety Executive (HS http://www.hse.gov.uk/	Revision Date 14.10.2022 Administration (OSHA), USA: Sampling a E), UK: Methods for the Determination o en Gesetzlichen Unfallversicherung (IFA sp et de Securité, (INRS), France http://www	f Hazardous Substances
Occupational Safety and Health / http://www.osha.gov/ Health and Safety Executive (HS http://www.hse.gov.uk/	E), UK: Methods for the Determination o en Gesetzlichen Unfallversicherung (IFA	f Hazardous Substances
http://www.osha.gov/ Health and Safety Executive (HS http://www.hse.gov.uk/	E), UK: Methods for the Determination o en Gesetzlichen Unfallversicherung (IFA	f Hazardous Substances
http://www.hse.gov.uk/	en Gesetzlichen Unfallversicherung (IFA	A), Germany
	sp	
	sp	
http://www.dguv.de/inhalt/index.js		<i>w</i> .inrs.fr/accueil
Engineering measures :	The level of protection and types of co	ntrols necessary will
Lingineering measures	vary depending upon potential exposu	
	controls based on a risk assessment o	
	Appropriate measures include:	
	Adequate ventilation to control airborne	e concentrations.
	Where material is heated, sprayed or r	nist formed, there is
	greater potential for airborne concentra	ations to be generated.
	General Information:	
	Define procedures for safe handling ar	id maintenance of
	controls. Educate and train workers in the hazar	ds and control
	measures relevant to normal activities	
	product.	
	Ensure appropriate selection, testing a	
	equipment used to control exposure, e equipment, local exhaust ventilation.	.g. personal protective
	Drain down system prior to equipment	break-in or
	maintenance.	
	Retain drain downs in sealed storage p	ending disposal or
	subsequent recycle. Always observe good personal hygien	a maggurag, such as
	washing hands after handling the mate	
	drinking, and/or smoking. Routinely wa	
	protective equipment to remove contar	ninants. Discard
	contaminated clothing and footwear the	at cannot be cleaned.
	Practice good housekeeping.	
	Due to the product's semi-solid consist	ency, generation of
	mists and dusts is unlikely to occur.	
Personal protective equipment		
Protective measures		
Personal protective equipment (F PPE suppliers.	PPE) should meet recommended nationa	al standards. Check with

precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker	Respiratory protection	If engineering controls do not maintain airborne	
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	health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65°C (149°F)].	
Hand protection		
Remarks	 Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubber gloves Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective han care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time of more than 240 minutes may hor be available and in this case. 	
	time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is no a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model.	
Eye protection	: If material is handled such that it could be splashed into eyes protective eyewear is recommended.	
Skin and body protection	 Skin protection is not ordinarily required beyond standard work clothes. It is good practice to wear chemical resistant gloves. 	
Thermal hazards	: Not applicable	
Environmental exposure c	controls	
General advice	Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given i Section 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment pla	

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	before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.
SECTION 9. PHYSICAL AND CHE	MICAL PROPERTIES
Appearance	: Semi-solid at ambient temperature.
Colour	: brown
Odour	: Slight hydrocarbon
Odour Threshold	: Data not available
рН	: Not applicable
Dropping point	: 180 °C / 356 °F Method: IP 396
Melting / freezing point	Data not available
Initial boiling point and boiling range	: Data not available
Flash point	: Not applicable
Evaporation rate	: Data not available
Flammability (solid, gas)	: Not applicable
Flammability (liquids)	: Not classified as flammable but will burn.
Upper explosion limit	: Typical 10 %(V)
Lower explosion limit	: Typical 1 %(V)
Vapour pressure	: < 0.5 Pa (20 °C / 68 °F) estimated value(s)
Relative vapour density	: > 1estimated value(s)
Relative density	: 1.000 (15 °C / 59 °F)
Density	: 1,000 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified
Solubility(ies)	
Water solubility	: negligible
Solubility in other solvents	: Data not available
Partition coefficient: n- octanol/water	: log Pow: > 6 (based on information on similar products)
Auto-ignition temperature	: > 320 °C / 608 °F

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Decomposition temperature	: Data not available	
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: Not applicable	
Explosive properties	: Classification Code: Not classified	
Oxidizing properties	: Data not available	
Conductivity Particle size	This material is not expected to be a sData not available	static accumulator.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Chemical stability	: Stable.
Possibility of hazardous reactions	: Reacts with strong oxidising agents.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidising agents.
Hazardous decomposition products	: No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	 LD50 rat: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the classification criteria are not met.

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Acute inhalation toxicity	: Remarks: Based on available data are not met.	, the classification criteria
Acute dermal toxicity	: LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the class	ification criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Remarks: Not a skin sensitiser. Based on available data, the classification criteria are not met.

Components:

Naphthenic acid:

Remarks: May cause an allergic skin reaction in sensitive individuals.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

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	Material	GHS/CLP Carcinogenicity Classification	l	
	Highly refined mineral oil	No carcinogenicity classification.		

Reproductive toxicity

Product:

Remarks: Not a developmental toxicant., Does not impair fertility., Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment	 Ecotoxicological data have not been determined specifically for this product.
	Information given is based on a knowledge of the components and the ecotoxicology of similar products.

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	Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Ecotoxicity	
Product:	
Toxicity to fish (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to algae/aquatic plants (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to fish (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Toxicity to microorganisms (Acute toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Persistence and degradability	
Product:	
Biodegradability	: Remarks: Not readily biodegradable., Major constituents are inherently biodegradable, but contains components that may persist in the environment.
Bioaccumulative potential	
Product:	
Bioaccumulation	: Remarks: Contains components with the potential to bioaccumulate.
Partition coefficient: n- octanol/water	 log Pow: > 6Remarks: (based on information on similar products)
Mobility in soil	
Product:	
Mobility	 Remarks: Semi-solid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be mobile. Remarks: Floats on water.

Version 4.5 Other adverse effects	Revision Date 14.10.2022	Print Date 15.10.2022
no data available <u>Product:</u>		
Additional ecological information	 Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential., Productis a mixture of non-volatile components, which will not be released to air in any significant quantities under normal conditions of use. Poorly soluble mixture., Causes physical fouling of aquatic organisms. Mineral oil does not cause chronic toxicity to aquatic organisms at concentrations less than 1 mg/l. 	

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water courses Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
	MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.
Contaminated packaging	: Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local legislation Remarks	: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

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SECTION 14. TRANSPORT INFORMATION

National Regulations

ADG

Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks

: Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform : No poison schedule number allocated Scheduling of Medicines and Poisons

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011). Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Other international regulations

The components of this product are reported in the following inventories:

REACH	: Not all components listed.
TSCA	: All components listed.
AIIC	: Listed introduction

SECTION 16. OTHER INFORMATION

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Full text of H-Statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
Full text of othe	er abbreviations
Acute Tox	Acute toxicity

Acute Tox.	Acute toxicity
Aquatic Chronic	Long-term (chronic) aquatic hazard
Eye Irrit.	Eye irritation
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitisation

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Date of preparation or review : 14.10.2022

Further information

Other information

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Version 4.5

Revision Date 14.10.2022

Print Date 15.10.2022

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

AU / EN

Version 2.9		Revision Date 14.10.2022	Print Date 15.10.2022
SECTION 1. PRODUCT AND (
Section 1. FRODUCT AND		ANTIDENTIFICATION	
Product name	:	Shell Gadus S2 V220AC 2	
Product code	:	001D8456	
Manufacturer or supplier	's det		
Supplier	:	Viva Energy Australia Pty Ltd (Formerly: The Shell Company of (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia	Australia)
Telephone Telefax		+61 (0)3 8823 4444 +61 (0)3 8823 4800	
Emergency telephone number	:	1800 651 818 (Australia). ; POIS0 CENTRE: 13 11 26 (Australia).	ONS INFORMATION
Recommended use of the	e cher	nical and restrictions on use	
Recommended use	:	Automotive and industrial grease.	
SECTION 2. HAZARDS IDENT	IFICA	TION	
GHS Classification			
Based on available data th	is sub	stance / mixture does not meet the	classification criteria.

: No Hazard Symbol required
: No signal word
 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
: Prevention: No precautionary phrases. Response: No precautionary phrases. Storage:

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Disposal:

No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).
	:	* contains one or more of the following CAS-numbers: 64742- 53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-65-0, 68037-01-4, 72623-86-0, 72623-87-1, 8042-47-5, 848301-69- 9, 68649-12-7, 151006-60-9, 163149-28-8, 64741-88-4,

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Interchangeable low viscosity base oil (<20,5 cSt @40°C) *	Not Assigned	Asp. Tox.1; H304	0 - 5
Alkyl thiadiazole	13539-13-4	Skin Irrit.2; H315 Skin Sens.1A; H317 Acute Tox.4; H332 Aquatic Chronic4; H413	0 - 0.099

64741-89-5.

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASURES

If inhaled	: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
In case of skin contact	: Remove contaminated clothing. Flush exposed area with

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	water and follow by washing with If persistent irritation occurs, obta	
	When using high pressure equips under the skin can occur. If high casualty should be sent immedia for symptoms to develop. Obtain medical attention even in wounds.	pressure injuries occur, the tely to a hospital. Do not wait
In case of eye contact	 Flush eye with copious quantities Remove contact lenses, if preser rinsing. If persistent irritation occurs, obtain 	nt and easy to do. Continue
If swallowed	: In general no treatment is necess are swallowed, however, get me	
Most important symptoms and effects, both acute and delayed	: Oil acne/folliculitis signs and sym of black pustules and spots on th Ingestion may result in nausea, v	e skin of exposed areas.
	Local necrosis is evidenced by de tissue damage a few hours follow	
Protection of first-aiders	: When administering first aid, ens appropriate personal protective e incident, injury and surroundings	equipment according to the
Notes to physician	: Treat symptomatically.	
	High pressure injection injuries re intervention and possibly steroid damage and loss of function. Because entry wounds are small seriousness of the underlying da determine the extent of involvem anaesthetics or hot soaks should can contribute to swelling, vasos surgical decompression, debride foreign material should be perfor anaesthetics, and wide exploration	therapy, to minimise tissue and do not reflect the mage, surgical exploration to ent may be necessary. Local l be avoided because they pasm and ischaemia. Prompt ment and evacuation of med under general

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	oam, water spray or fog. Dry chemic oxide, sand or earth may be used fo	
Unsuitable extinguishing media	o not use water in a jet.	
Specific hazards during firefighting	azardous combustion products may complex mixture of airborne solid a	

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		gases (smoke). Carbon monoxide may be evolve occurs. Unidentified organic and inorgan	
Specific extinguishing methods	:	Use extinguishing measures tha circumstances and the surround	
Special protective equipment for firefighters	:	Proper protective equipment incl gloves are to be worn; chemical large contact with spilled produc Breathing Apparatus must be wo a confined space. Select fire figh relevant Standards (e.g. Europe	resistant suit is indicated if it is expected. Self-Contained orn when approaching a fire in inter's clothing approved to
Hazchem Code	:	NONE	
SECTION 6. ACCIDENTAL RELEA	ASI		
Personal precautions, protective equipment and emergency procedures	:	Avoid contact with skin and eyes	۶.
Environmental precautions	:	Use appropriate containment to contamination. Prevent from spr ditches or rivers by using sand, e barriers.	eading or entering drains,
Methods and materials for containment and cleaning up	:	Prevent from spreading or enteri rivers by using sand, earth, or ot	
Additional advice	:	For guidance on selection of per see Section 8 of this Safety Data For guidance on disposal of spill this Safety Data Sheet.	a Sheet.
SECTION 7. HANDLING AND STO	DR/	AGE	

General Precautions	 Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Advice on safe handling	 Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.

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Avoidance of contact	: Strong oxidising agents.	
Storage		
Other data	: Keep container tightly closed and i place. Use properly labeled and closable	
	Store at ambient temperature.	
Packaging material	: Suitable material: For containers or steel or high density polyethylene. Unsuitable material: PVC.	r container linings, use mild
Container Advice	: Polyethylene containers should no temperatures because of possible	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	Australia. Workplace Exposure Standards for Airborne Contaminant s.
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

Components with workplace control parameters

Biological occupational exposure limits

Biological Limit Values (BLV) have not been established for this material.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and

samples analysed by an accredited laboratory. Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

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	alth Administration (OSHA), USA: Sampling and Analytical Methods
http://www.osha.gov/	
	(HSE), UK: Methods for the Determination of Hazardous Substances
http://www.hse.gov.uk/	
	tschen Gesetzlichen Unfallversicherung (IFA), Germany
http://www.dguv.de/inhalt/ind	
L'Institut National de Recherd	che et de Securité, (INRS), France http://www.inrs.fr/accueil
Engineering measures	: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select
	controls based on a risk assessment of local circumstances. Appropriate measures include:
	Adequate ventilation to control airborne concentrations.
	Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
	General Information:
	Define procedures for safe handling and maintenance of controls.
	Educate and train workers in the hazards and control
	measures relevant to normal activities associated with this product.
	Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.
	Drain down system prior to equipment break-in or maintenance.
	Retain drain downs in sealed storage pending disposal or subsequent recycle.
	Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned.
	Practice good housekeeping.
	Due to the product's semi-solid consistency, generation of mists and dusts is unlikely to occur.
Personal protective equipn	nent
Protective measures	
Personal protective equipme	nt (PPF) should meet recommended national standards. Check with

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Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory protection	 No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the
	nearin, select respiratory protection equipment suitable for the

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	specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65° (149°F)].
Hand protection	
Remarks	: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubber gloves Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective han care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. For continuous contact we recommend gloves with
	breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is no a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model.
Eye protection	: If material is handled such that it could be splashed into eyes protective eyewear is recommended.
Skin and body protection	 Skin protection is not ordinarily required beyond standard work clothes. It is good practice to wear chemical resistant gloves.
Thermal hazards	: Not applicable
Environmental exposure c	controls
General advice	Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given i Section 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment pla before discharge to surface water.

before discharge to surface water.

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	Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air contair vapour.	
SECTION 9. PHYSICAL AND CHE	ICAL PROPERTIES	
Appearance	Semi-solid at ambient temperature.	
Colour	red	
Odour	Slight hydrocarbon	
Odour Threshold	Data not available	
рН	Not applicable	
Drop point	175 °C / 347 °F Method: IP 396	
Melting / freezing point	Data not available	
Initial boiling point and boiling range	Data not available	
Flash point	Not applicable	
Evaporation rate	Data not available	
Flammability (solid, gas)	Not applicable	
Flammability (liquids)	Not classified as flammable but will burn.	
Upper explosion limit	: Typical 10 %(V)	
Lower explosion limit	: Typical 1 %(V)	
Vapour pressure	< 0.5 Pa (20 °C / 68 °F) estimated value(s)	
Relative vapour density	> 1estimated value(s)	
Relative density	: 1.000 (15 °C / 59 °F)	
Density	: 1,000 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified	
Solubility(ies)		
Water solubility	negligible	
Solubility in other solvents	Data not available	
Partition coefficient: n- octanol/water	log Pow: > 6 (based on information on similar products)	
Auto-ignition temperature	> 320 °C / 608 °F	

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Version 2.9 Decomposition temperature	Revision Date 14.10.2022	Print Date 15.10.2022
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: Not applicable	
Explosive properties	: Classification Code: Not classified	
Oxidizing properties	: Data not available	
Conductivity Particle size	: This material is not expected to be a : Data not available	static accumulator.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Chemical stability	: Stable.
Possibility of hazardous reactions	: Reacts with strong oxidising agents.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidising agents.
Hazardous decomposition products	: No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	 LD50 rat: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the classification criteria are not met.

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Acute inhalation toxicity	: Remarks: Based on available data are not met.	, the classification criteria
Acute dermal toxicity	: LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the class	ification criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Remarks: Not a skin sensitiser. Based on available data, the classification criteria are not met.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Material	GHS/CLP Carcinogenicity Classification
Highly refined mineral oil	No carcinogenicity classification.

Reproductive toxicity

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Product:

Remarks: Not a developmental toxicant., Does not impair fertility., Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

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SECTION 12. ECOLOGICAL INFORMATION

for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).	Basis for assessment	Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for
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Ecotoxicity

Product:

Toxicity to fish (Acute

Version 2.9	Revision Date 14.10.2022 Print Date 15.10.2022 Pomarke: LL/EL/IL 50 > 100 mg/l
toxicity)	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic:
	Based on available data, the classification criteria are not met.
Toxicity to crustacean (Acute	:
toxicity)	Remarks: LL/EL/IL50 > 100 mg/l
	Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to algae/aquatic plants (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l
	Practically non toxic:
	Based on available data, the classification criteria are not met.
Toxicity to fish (Chronic	: Remarks: Based on available data, the classification criteria
toxicity)	are not met.
Toxicity to crustacean (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Toxicity to microorganisms (Acute toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Persistence and degradability	
Product:	
Biodegradability	: Remarks: Not readily biodegradable., Major constituents are inherently biodegradable, but contains components that may
	persist in the environment.
Bioaccumulative potential	
Product:	
Bioaccumulation	: Remarks: Contains components with the potential to
	bioaccumulate.
Partition coefficient: n- octanol/water	: log Pow: > 6Remarks: (based on information on similar
Mobility in soil	products)
-	
Product:	
Mobility	: Remarks: Semi-solid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be
	mobile. Remarks: Floats on water.
Other adverse effects	Remarks. Floats on water.
no data available Product:	
Additional ecological	: Does not have ozone depletion potential, photochemical
information	ozone creation potential or global warming potential., Product is a mixture of non-volatile components, which will not be
	· · ·

released to air in any significant qu conditions of use. Poorly soluble mixture., Causes pl organisms. Mineral oil does not cause chronic organisms at concentrations less t	hysical fouling of aquatic

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water courses Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
	MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.
Contaminated packaging	: Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local legislation Remarks	 Disposal should be in accordance with applicable regional, national, and local laws and regulations.

SECTION 14. TRANSPORT INFORMATION

National Regulations

ADG

Not regulated as a dangerous good

International Regulations

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IATA-DGR Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks

: Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform Scheduling of Medicines and Poisons : No poison schedule number allocated

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011). Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Other international regulations

The components of this product are reported in the following inventories:

REACH	:	Not established.
TSCA	:	All components listed.
AIIC	:	Listed introduction

SECTION 16. OTHER INFORMATION

Full text of H-Statements

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H413	May cause long lasting harmful effects to aquatic life.

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Full text of other abbreviations

Acute Tox. Aquatic Chronic	Acute toxicity Long-term (chronic) aquatic hazard
Aqualle Chronic Asp. Tox.	Aspiration hazard
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitisation

Abbreviations and Acronyms

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation: DSL - Domestic Substances List (Canada): ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature: SDS - Safety Data Sheet: TCSI - Taiwan Chemical Substance Inventory; TDG -Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date of preparation or review : 14.10.2022

Further information

Other information

: A vertical bar (|) in the left margin indicates an amendment from the previous version.

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AU / EN

Shell Gadus S2 V220AD 1

ersion 2.3	Revision Date 18.07.2023	Print Date 19.07.2023
ECTION 1. PRODUCT AND C	COMPANY IDENTIFICATION	
Product name	: Shell Gadus S2 V220AD 1	
Product code	: 001D8457	
Manufacturer or supplier	's details	
Supplier	 Viva Energy Australia Pty Ltd (Formerly: The Shell Company of (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia 	f Australia)
Telephone Telefax	: +61 (0)3 8823 4444 : +61 (0)3 8823 4800	
Emergency telephone number	: 1800 651 818 (Australia). ; POIS CENTRE: 13 11 26 (Australia).	ONS INFORMATION
Recommended use of the	e chemical and restrictions on use	
	: Automotive and industrial grease	

GHS Classification

Based on available data this substance / mixture does not meet the classification criteria.

GHS label elements	
Hazard pictograms	: No Hazard Symbol required
Signal word	: No signal word
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Precautionary statements	: Prevention: No precautionary phrases. Response: No precautionary phrases. Storage:

Shell Gadus S2 V220AD 1

Version 2.3

Revision Date 18.07.2023 No precautionary phrases. Print Date 19.07.2023

Disposal:

No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%			
			w/w)			
Distillates (petroleum), solvent- dewaxed heavy paraffinic	64742-65-0	Asp. Tox.1; H304	0 - 5			

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASURES

If inhaled	No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
In case of skin contact	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
	When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.

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In case of eye contact	:	Flush eye with copious quantities of w Remove contact lenses, if present and rinsing. If persistent irritation occurs, obtain m	d easy to do. Continue
If swallowed	:	In general no treatment is necessary a are swallowed, however, get medical a	
Most important symptoms and effects, both acute and delayed	:	Oil acne/folliculitis signs and symptom of black pustules and spots on the ski Ingestion may result in nausea, vomiti	n of exposed areas.
		Local necrosis is evidenced by delaye tissue damage a few hours following i	
Protection of first-aiders	:	When administering first aid, ensure the appropriate personal protective equipse incident, injury and surroundings.	
Notes to physician	:	Treat symptomatically.	
		High pressure injection injuries require intervention and possibly steroid thera damage and loss of function. Because entry wounds are small and seriousness of the underlying damage determine the extent of involvement m anaesthetics or hot soaks should be a can contribute to swelling, vasospasm surgical decompression, debridement foreign material should be performed anaesthetics, and wide exploration is	do not reflect the e, surgical exploration to hay be necessary. Local woided because they and ischaemia. Prompt and evacuation of under general

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.
Specific hazards during firefighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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Special protective equipment for firefighters	:	Proper protective equipment including gloves are to be worn; chemical resist large contact with spilled product is ex Breathing Apparatus must be worn wh a confined space. Select fire fighter's of relevant Standards (e.g. Europe: EN4	ant suit is indicated if pected. Self-Contained nen approaching a fire in clothing approved to
Hazchem Code	:	NONE	
SECTION 6. ACCIDENTAL RELEA	\S	EMEASURES	
Personal precautions, protective equipment and emergency procedures	:	Avoid contact with skin and eyes.	
Environmental precautions	:	Use appropriate containment to avoid contamination. Prevent from spreading ditches or rivers by using sand, earth, barriers.	g or entering drains,
Methods and materials for containment and cleaning up	:	Prevent from spreading or entering int rivers by using sand, earth, or other ap	
Additional advice	:	For guidance on selection of personal see Section 8 of this Safety Data Shee For guidance on disposal of spilled ma this Safety Data Sheet.	et.

SECTION 7. HANDLING AND STORAGE

General Precautions :	Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Advice on safe handling :	Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.
Avoidance of contact :	Strong oxidising agents.
Storage	
Other data :	Keep container tightly closed and in a cool, well-ventilated place. Use properly labeled and closable containers.
	Store at ambient temperature.

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Packaging material	: Suitable material: For containers or steel or high density polyethylene. Unsuitable material: PVC.	
Container Advice	: Polyethylene containers should no temperatures because of possible	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral Oil mist, mineral	Not Assigned Not Assigned	TWA (Mist) TWA (Mist)	5 mg/m3 5 mg/m3	AU OEL Australia. Workplace Exposure Standards for Airborne Contaminant s.
Oil mist, mineral Oil mist, mineral	Not Assigned Not Assigned	TWA (Mist) TWA (Inhalable particulate matter)	5 mg/m3 5 mg/m3	OSHA Z-1 ACGIH

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp

L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

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rsion 2.3	Revision Date 18.07.2023	Print Date 19.07.202
rsion 2.3 Engineering measures	Revision Date 18.07.2023 : The level of protection and types of vary depending upon potential exploring upon potential exploring based on a risk assessmed Appropriate measures include: Adequate ventilation to control airl Where material is heated, sprayed greater potential for airborne concord General Information: Define procedures for safe handling controls. Educate and train workers in the homeasures relevant to normal active product. Ensure appropriate selection, test equipment used to control exposure equipment, local exhaust ventilation	of controls necessary will posure conditions. Select ent of local circumstances. borne concentrations. d or mist formed, there is centrations to be generated. Ing and maintenance of mazards and control ities associated with this ing and maintenance of re, e.g. personal protective on.
	maintenance. Retain drain downs in sealed stora subsequent recycle. Always observe good personal hy	age pending disposal or
	washing hands after handling the drinking, and/or smoking. Routine protective equipment to remove co contaminated clothing and footwe Practice good housekeeping.	material and before eating, ely wash work clothing and ontaminants. Discard
	Due to the product's semi-solid co mists and dusts is unlikely to occu	
Personal protective equ	ipment	
Protective measures		
Personal protective equip PPE suppliers.	oment (PPE) should meet recommended na	itional standards. Check wit
Respiratory protection	 No respiratory protection is ordinal conditions of use. In accordance with good industrial precautions should be taken to av If engineering controls do not main concentrations to a level which is health, select respiratory protection specific conditions of use and meet Check with respiratory protective of Where air-filtering respirators are appropriate combination of mask appropriate combination combi	I hygiene practices, oid breathing of material. ntain airborne adequate to protect worker in equipment suitable for the eting relevant legislation. equipment suppliers. suitable, select an

Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65°C (149°F)].

sion 2.3	Revision Date 18.07.2023	Print Date 19.07.202
Hand protection		
Remarks	: Where hand contact with the proc gloves approved to relevant stand US: F739) made from the followir suitable chemical protection. PVC gloves Suitability and durability of usage, e.g. frequency and duration resistance of glove material, dext from glove suppliers. Contaminat replaced. Personal hygiene is a k care. Gloves must only be worn of gloves, hands should be washed Application of a non-perfumed mo	dards (e.g. Europe: EN374, ng materials may provide C, neoprene or nitrile rubber f a glove is dependent on on of contact, chemical erity. Always seek advice ed gloves should be ey element of effective han on clean hands. After using and dried thoroughly.
	For continuous contact we recombreakthrough time of more than 2 for > 480 minutes where suitable short-term/splash protection we recognize that suitable gloves offi- may not be available and in this of time maybe acceptable so long a and replacement regimes are follor a good predictor of glove resistand dependent on the exact composition Glove thickness should be typical depending on the glove make and	40 minutes with preference gloves can be identified. For ecommend the same but ering this level of protection case a lower breakthrough s appropriate maintenance owed. Glove thickness is no ice to a chemical as it is ion of the glove material. Ily greater than 0.35 mm
Eye protection	: If material is handled such that it protective eyewear is recommend	
Skin and body protection	: Skin protection is not ordinarily re work clothes. It is good practice to wear chemic	
Thermal hazards	: Not applicable	
Environmental exposure of	ontrols	
General advice	: Take appropriate measures to ful relevant environmental protection contamination of the environment Section 6. If necessary, prevent being discharged to waste water. treated in a municipal or industria before discharge to surface water	legislation. Avoid by following advice given i undissolved material from Waste water should be I waste water treatment pla

before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Semi-solid at ambient temperature.
Colour	: black

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Odour Odour Thread add		Slight hydrocarbon	
Odour Threshold		Data not available	
pH		Not applicable	
Drop point		170 °C / 338 °F Method: IP 396	
Melting point/freezing point		Data not available	
Initial boiling point and boiling range	:	Data not available	
Flash point	:	Not applicable	
Evaporation rate	:	Data not available	
Flammability (solid, gas)	:	Not applicable	
Flammability (liquids)	:	Not classified as flammable but will burn	٦.
Upper explosion limit	:	Typical 10 %(V)	
Lower explosion limit	:	Typical 1 %(V)	
Vapour pressure		< 0.5 Pa (20 °C / 68 °F) estimated value(s)	
Relative vapour density	:	> 1estimated value(s)	
Relative density	:	1.000 (15 °C / 59 °F)	
Density	:	1,000 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified	
Solubility(ies)			
Water solubility	:	negligible	
Solubility in other solvents	:	Data not available	
Partition coefficient: n- octanol/water		log Pow: > 6 (based on information on similar produc	ts)
Auto-ignition temperature	:	> 320 °C / 608 °F	
Decomposition temperature	:	Data not available	
Viscosity			
Viscosity, dynamic	:	Data not available	
Viscosity, kinematic		220 mm2/s (40 °C / 104 °F) Method: ASTM D445	
		18 mm2/s (100 °C / 212 °F)	

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Version 2.3	Revision Date 18.07.2023 Method: ASTM D445	Print Date 19.07.2023
Explosive properties	: Classification Code: Not classified	
Oxidizing properties	: Data not available	
Conductivity	: This material is not expected to be a	static accumulator.
SECTION 10. STABILITY AND	REACTIVITY	

Reactivity	: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Chemical stability	: Stable.
Possibility of hazardous reactions	: Reacts with strong oxidising agents.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidising agents.
Hazardous decomposition products	: No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	 LD50 rat: > 5,000 mg/kg Remarks: Low toxicity Based on available data, the classification criteria are not met.
Acute inhalation toxicity	: Remarks: Based on available data, the classification criteria are not met.
Acute dermal toxicity	 LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity Based on available data, the classification criteria are not met.

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Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Remarks: Not a skin sensitiser. Based on available data, the classification criteria are not met.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Material	GHS/CLP Carcinogenicity Classification
Highly refined mineral oil	No carcinogenicity classification.

Reproductive toxicity

Product:

Remarks: Not a developmental toxicant., Does not impair fertility., Based on available data, the classification criteria are not met.

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STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment	 Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Ecotoxicity	
Product:	
Toxicity to fish (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Acute	

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toxicity)	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic:
	Based on available data, the classification criteria are not met.
Toxicity to algae/aquatic	
plants (Acute toxicity)	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic:
	Based on available data, the classification criteria are not met.
Toxicity to fish (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Toxicity to microorganisms (Acute toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Persistence and degradability	
Product:	
Biodegradability	: Remarks: Not readily biodegradable., Major constituents are inherently biodegradable, but contains components that may persist in the environment.
Bioaccumulative potential	
Product:	
Bioaccumulation	: Remarks: Contains components with the potential to bioaccumulate.
Partition coefficient: n- octanol/water	 log Pow: > 6Remarks: (based on information on similar products)
Mobility in soil	
Product:	
Mobility	 Remarks: Semi-solid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be mobile. Remarks: Floats on water.
Other adverse effects	
no data available <u>Product:</u>	
Additional ecological information	 Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential., Product is a mixture of non-volatile components, which will not be released to air in any significant quantities under normal conditions of use. Poorly soluble mixture., Causes physical fouling of aquatic organisms. Mineral oil does not cause chronic toxicity to aquatic

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water courses. Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
	MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.
Contaminated packaging	Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local legislation Remarks	 Disposal should be in accordance with applicable regional, national, and local laws and regulations.

SECTION 14. TRANSPORT INFORMATION

National Regulations

ADG

Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

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Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks

: Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform : No poison schedule number allocated Scheduling of Medicines and Poisons

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011). Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Other international regulations

The components of this product are reported in the following inventories:

TSCA	:	All components listed.
AICS	:	All components listed.

SECTION 16. OTHER INFORMATION

Full text of H-Statements

H304 May be fatal if swallowed and enters airways. **Full text of other abbreviations**

Asp. Tox. Aspiration hazard

Abbreviations and Acronyms

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with

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x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System: GLP - Good Laboratory Practice: IARC - International Agency for Research on Cancer: IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG -Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date of preparation or review : 18.07.2023

Further information

Other information

: A vertical bar (|) in the left margin indicates an amendment from the previous version.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

AU / EN

Shell Gadus S2 V220AD 2

		Baulaian Bata 44.40.0000	
Version 2.12		Revision Date 14.10.2022	Print Date 15.10.2022
SECTION 1. PRODUCT AND	СОМР	ANY IDENTIFICATION	
Product name	:	Shell Gadus S2 V220AD 2	
Product code	:	001D8458	
Manufacturer or supplier	's det	ails	
Supplier	:	Viva Energy Australia Pty Ltd (Formerly: The Shell Company of (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia	f Australia)
Telephone Telefax		: +61 (0)3 8823 4444 : +61 (0)3 8823 4800	
Emergency telephone number		: 1800 651 818 (Australia). ; POIS CENTRE: 13 11 26 (Australia).	ONS INFORMATION
Recommended use of the	e chei	nical and restrictions on use	
Recommended use	:	Automotive and industrial grease.	
SECTION 2. HAZARDS IDENT	IFICA	TION	
GHS Classification			
Based on available data th	is sub	stance / mixture does not meet the	classification criteria.
GHS label elements			

On 15 laber elements	
Hazard pictograms	: No Hazard Symbol required
Signal word	: No signal word
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Precautionary statements	Prevention: No precautionary phrases. Response: No precautionary phrases.
	Storage:

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Disposal:

No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Distillates (petroleum), solvent- dewaxed heavy paraffinic	64742-65-0	Asp. Tox.1; H304	0 - < 3
Alkyl thiadiazole	13539-13-4	Skin Irrit.2; H315 Skin Sens.1A; H317 Acute Tox.4; H332 Aquatic Chronic4; H413	0 - < 0.1

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASURES

If symptoms persist, obtain medical advice.) <u>.</u>
In case of skin contact : Remove contaminated clothing. Flush exposed area wir water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.	ih
When using high pressure equipment, injection of produunder the skin can occur. If high pressure injuries occur	

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	casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.
In case of eye contact	 Flush eye with copious quantities of water. Remove contact lenses, if present and easy to do. Continue rinsing. If persistent irritation occurs, obtain medical attention.
If swallowed	: In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Most important symptoms and effects, both acute and delayed	: Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.
	Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection.
Protection of first-aiders	: When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.
Notes to physician	: Treat symptomatically.
	High pressure injection injuries require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anaesthetics, and wide exploration is essential.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.
Specific hazards during firefighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.

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Specific extinguishing methods	:	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.	
Special protective equipment for firefighters	:	: Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).	
Hazchem Code	:	NONE	
SECTION 6. ACCIDENTAL RELEASE MEASURES			
Personal precautions, protective equipment and emergency procedures		Avoid contact with skin and eyes.	
Environmental precautions	precautions : Use appropriate containment to avoid environmental		environmental

		barriers.
Methods and materials for containment and cleaning up	:	Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Additional advice	:	For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.

contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate

SECTION 7. HANDLING AND STORAGE

General Precautions	 Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. 	
Advice on safe handling	 Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. 	
Avoidance of contact	: Strong oxidising agents.	

Storage

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Other data	 Keep container tightly closed and in a place. Use properly labeled and closable co 	
	Store at ambient temperature.	
Packaging material	 Suitable material: For containers or c steel or high density polyethylene. Unsuitable material: PVC. 	ontainer linings, use mild
Container Advice	: Polyethylene containers should not b temperatures because of possible ris	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	Australia. Workplace Exposure Standards for Airborne Contaminant s.
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

Components with workplace control parameters

Biological occupational exposure limits

Biological Limit Values (BLV) have not been established for this material.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany

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http://www.dguv.de/inhalt/inc L'Institut National de Recher	lex.jsp che et de Securité, (INRS), France http:	//www.inrs.fr/accueil
Engineering measures	 The level of protection and types vary depending upon potential excontrols based on a risk assessm Appropriate measures include: Adequate ventilation to control air Where material is heated, sprayed greater potential for airborne cond General Information: Define procedures for safe handli controls. Educate and train workers in the I measures relevant to normal activity product. Ensure appropriate selection, test equipment used to control exposue equipment, local exhaust ventilati Drain down system prior to equipmaintenance. Retain drain downs in sealed stor subsequent recycle. Always observe good personal hy washing hands after handling the drinking, and/or smoking. Routine protective equipment to remove contaminated clothing and footwer Practice good housekeeping. 	posure conditions. Select ent of local circumstances. borne concentrations. d or mist formed, there is centrations to be generated. ng and maintenance of hazards and control vities associated with this ting and maintenance of ure, e.g. personal protective on. ment break-in or age pending disposal or vgiene measures, such as material and before eating, ely wash work clothing and contaminants. Discard

Personal protective equipment

Protective measures

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory protection :	No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65°C (149°F)].
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sion 2.12	Revision Date 14.10.2022	Print Date 15.10.202
Hand protection Remarks	: Where hand contact with the proc gloves approved to relevant stand US: F739) made from the followin suitable chemical protection. PVC gloves Suitability and durability of usage, e.g. frequency and duratio resistance of glove material, dexte from glove suppliers. Contaminate replaced. Personal hygiene is a k care. Gloves must only be worn o gloves, hands should be washed Application of a non-perfumed mo	lards (e.g. Europe: EN374, g materials may provide c, neoprene or nitrile rubber a glove is dependent on n of contact, chemical erity. Always seek advice ed gloves should be ey element of effective han n clean hands. After using and dried thoroughly.
	For continuous contact we recom breakthrough time of more than 2 for > 480 minutes where suitable short-term/splash protection we re recognize that suitable gloves offe may not be available and in this c time maybe acceptable so long as and replacement regimes are follo a good predictor of glove resistan dependent on the exact composit Glove thickness should be typical depending on the glove make and	40 minutes with preference gloves can be identified. For ecommend the same but ering this level of protection ase a lower breakthrough appropriate maintenance owed. Glove thickness is no ce to a chemical as it is ion of the glove material. ly greater than 0.35 mm
Eye protection	: If material is handled such that it of protective eyewear is recommend	
Skin and body protection	 Skin protection is not ordinarily re work clothes. It is good practice to wear chemic 	
Thermal hazards	: Not applicable	
Environmental exposure of	controls	
General advice	 Take appropriate measures to full relevant environmental protection contamination of the environment Section 6. If necessary, prevent u being discharged to waste water. treated in a municipal or industria before discharge to surface water Local guidelines on emission limit 	legislation. Avoid by following advice given in undissolved material from Waste water should be waste water treatment pla

Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Semi-solid at ambient temperature.

sion 2.12 Colour	Revision Date 14.10.2022 : black	Print Date 15.10.2
Odour	: Slight hydrocarbon	
Odour Threshold	: Data not available	
рН	: Not applicable	
Drop point	: 175 °C / 347 °F Method: IP 396	
Melting / freezing point	Not applicable	
Initial boiling point and boiling range	: Data not available	
Flash point	: Not applicable	
Evaporation rate	: Data not available	
Flammability (solid, gas)	: Not applicable	
Flammability (liquids)	: Not classified as flammable b	but will burn.
Upper explosion limit	: Typical 10 %(V)	
Lower explosion limit	: Typical 1 %(V)	
Vapour pressure	: < 0.5 Pa (20 °C / 68 °F) estimated value(s)	
Relative vapour density	: > 1estimated value(s)	
Relative density	:1.000 (15 °C / 59 °F)	
Density	: 1,000 kg/m3 (15.0 °C / 59.0 ° Method: Unspecified	F)
Solubility(ies)		
Water solubility	: negligible	
Solubility in other solvents	: Data not available	
Partition coefficient: n- octanol/water	: log Pow: > 6 (based on information on sim	ilar products)
Auto-ignition temperature	: > 320 °C / 608 °F	
Decomposition temperature	: Data not available	
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: Not applicable	
Explosive properties	: Classification Code: Not class	sified

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Oxidizing properties	: Data not available	
Conductivity Particle size	: This material is not expected to be : Data not available	e a static accumulator.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Chemical stability	: Stable.
Possibility of hazardous reactions	: Reacts with strong oxidising agents.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidising agents.
Hazardous decomposition products	: No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	 LD50 rat: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the classification criteria are not met.
Acute inhalation toxicity	: Remarks: Based on available data, the classification criteria are not met.
Acute dermal toxicity	: LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the classification criteria are not met.

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Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Remarks: Not a skin sensitiser. Based on available data, the classification criteria are not met.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Material	GHS/CLP Carcinogenicity Classification
Highly refined mineral oil	No carcinogenicity classification.

Reproductive toxicity

Product:

Remarks: Not a developmental toxicant., Does not impair fertility., Based on available data, the classification criteria are not met.

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STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment	 Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Ecotoxicity	
Product:	
Toxicity to fish (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic:

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	Based on available data, the classification criteria are not met.
Toxicity to algae/aquatic plants (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to fish (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Toxicity to microorganisms (Acute toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Persistence and degradability	
Product:	
Biodegradability	 Remarks: Not readily biodegradable., Major constituents are inherently biodegradable, but contains components that may persist in the environment.
Bioaccumulative potential	
Product:	
Bioaccumulation	: Remarks: Contains components with the potential to bioaccumulate.
Partition coefficient: n- octanol/water	: log Pow: > 6Remarks: (based on information on similar products)
Mobility in soil	
Product:	
Mobility	 Remarks: Semi-solid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be mobile. Remarks: Floats on water.
Other adverse effects	
no data available <u>Product:</u>	
Additional ecological information	 Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential., Product is a mixture of non-volatile components, which will not be released to air in any significant quantities under normal conditions of use. Poorly soluble mixture., Causes physical fouling of aquatic organisms. Mineral oil does not cause chronic toxicity to aquatic organisms at concentrations less than 1 mg/l.

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water courses Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
	MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.
Contaminated packaging	Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local legislation Remarks	: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

SECTION 14. TRANSPORT INFORMATION

National Regulations

ADG Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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Maritime transport in bulk according to IMO instruments		

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks

: Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform : No poison schedule number allocated Scheduling of Medicines and Poisons

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011).

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Other international regulations

The components of this product are reported in the following inventories:

REACH	:	Not established.
TSCA	:	All components listed.
AIIC	:	Listed introduction

SECTION 16. OTHER INFORMATION

Full text of H-Statements

H304 H315 H317	May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction.
H332	Harmful if inhaled.
H413	May cause long lasting harmful effects to aquatic life.
Full text of other abb	previations
Acute Tox.	Acute toxicity
Aquatic Chronic	Long-term (chronic) aquatic hazard
Asp. Tox.	Aspiration hazard
Skin Irrit.	Skin irritation

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Skin Sens.

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Abbreviations and Acronyms

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG -Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date of preparation or review : 14.10.2022

Further information

Other information

: A vertical bar (|) in the left margin indicates an amendment from the previous version.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

AU / EN

Shell Gadus S2 V1000AD 2

Version 2.2	Revision Date 10.08.2016	Print Date 11.08.2016		
SECTION 1. PRODUCT AND COMPANY IDENTIFICATION				
Product name	: Shell Gadus S2 V1000AD 2			
Product code	: 001D8467			
Manufacturer or supplier's Supplier Telephone Telefax Emergency telephone number	details : Viva Energy Australia Pty Ltd (Formerly: The Shell Company of (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia : +61 (0)3 8823 4444 ; : +61 (0)3 8823 4800 : 1800 651 818 (Australia). POISO CENTRE: 13 11 26 (Australia).			
Recommended use of the o	chemical and restrictions on use			
Recommended use	: Automotive and industrial grease.			

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification		
Chronic aquatic toxicity	:	Category 3
GHS label elements		
Hazard pictograms	:	No Hazard Symbol required
Signal word	:	No signal word
Hazard statements	:	PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	:	Prevention: P273 Avoid release to the environment. Response: No precautionary phrases. Storage: No precautionary phrases. Disposal:

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	P501 Dispose of contents/ container to disposal plant.	o an approved waste

Sensitising components : Contains zinc dithiocarbamate.May produce an allergic reaction.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

 A lubricating grease containing highly-refined mineral oils and additives.
 The highly refined mineral oil contains <3% (w/w) DMSOextract, according to IP346.

Hazardous components

Chemical name	CAS-No.	Classification	Concentration [%]
Potassium borate	12712-38-8	Aquatic Chronic4; H413	1 - 3
Zinc dithiocarbamate	15337-18-5	Skin Sens.1B; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410	0.25 - 2.4

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASURES

General advice	: Not expected to be a health hazard when used under normal conditions.
If inhaled	: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
In case of skin contact	 Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait
	for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.

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In case of eye contact	:	Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.	
If swallowed	:	In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.	
Most important symptoms and effects, both acute and delayed	:	Oil acne/folliculitis signs and symptoms of black pustules and spots on the skin Ingestion may result in nausea, vomitir	of exposed areas.
		Local necrosis is evidenced by delayed tissue damage a few hours following in	
Protection of first-aiders	:	When administering first aid, ensure th appropriate personal protective equipm incident, injury and surroundings.	
Notes to physician	:	Treat symptomatically.	
		High pressure injection injuries require intervention and possibly steroid therag damage and loss of function. Because entry wounds are small and of seriousness of the underlying damage, determine the extent of involvement manaesthetics or hot soaks should be and can contribute to swelling, vasospasm surgical decompression, debridement a foreign material should be performed up anaesthetics, and wide exploration is e	by, to minimise tissue do not reflect the , surgical exploration to ay be necessary. Local voided because they and ischaemia. Prompt and evacuation of under general

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.
Specific hazards during firefighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if

Version 2.2	Revision Date 10.08.2016Print Date 11.08.2016large contact with spilled product is expected. Self-ContainedBreathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).
Hazchem Code	: NONE
SECTION 6. ACCIDENTAL RELEA	ASE MEASURES
Personal precautions, protective equipment and emergency procedures	: Avoid contact with skin and eyes.
Environmental precautions	: Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Methods and materials for containment and cleaning up	: Shovel into a suitable clearly marked container for disposal or reclamation in accordance with local regulations.
Additional advice	 For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet.

SECTION 7. HANDLING AND STORAGE

General Precautions	:	Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Advice on safe handling	:	Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.
Avoidance of contact	:	Strong oxidising agents.
Storage		
Other data	:	Keep container tightly closed and in a cool, well-ventilated place. Use properly labeled and closable containers. Store at ambient temperature.

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Packaging material	: Suitable material: For containers or steel or high density polyethylene. Unsuitable material: PVC.	container linings, use mild
Container Advice	: Polyethylene containers should not temperatures because of possible ri	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL
Oil mist, mineral	Not Assigned	TWA ((inhalable fraction))	5 mg/m3	US. ACGIH Threshold Limit Values
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	Australia. Workplace Exposure Standards for Airborne Contaminant s.
Oil mist, mineral	Not Assigned Not Assigned	TWA (Mist) TWA (Inhalable fraction)	5 mg/m3 5 mg/m3	OSHA Z-1 ACGIH

Components with workplace control parameters

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp

L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

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Engineering measures	 The level of protection and types vary depending upon potential exp controls based on a risk assessmed 	posure conditions. Select
	Appropriate measures include:	
	Adequate ventilation to control air	borne concentrations.
	Where material is heated, sprayed greater potential for airborne conc	
	General Information: Define procedures for safe handlir controls.	ng and maintenance of
	Educate and train workers in the h measures relevant to normal activ product.	
	Ensure appropriate selection, test equipment used to control exposu	re, e.g. personal protectiv
	equipment, local exhaust ventilation Drain down system prior to equipr maintenance.	
	Retain drain downs in sealed stora subsequent recycle.	
	Always observe good personal hy washing hands after handling the drinking, and/or smoking. Routine	material and before eating
	protective equipment to remove contaminated clothing and footwe Practice good housekeeping.	ontaminants. Discard
	Due to the product's semi-solid co mists and dusts is unlikely to occu	
Personal protective equip	ment	
Protective measures		
Personal protective equipme PPE suppliers.	ent (PPE) should meet recommended na	tional standards. Check v
Respiratory protection	: No respiratory protection is ordina conditions of use.	
	In accordance with good industria precautions should be taken to av If engineering controls do not main	oid breathing of material. ntain airborne
	concentrations to a level which is health, select respiratory protectio specific conditions of use and mee Check with respiratory protective Where air-filtering respirators are	n equipment suitable for t eting relevant legislation. equipment suppliers. suitable, select an
	appropriate combination of mask a Select a filter suitable for the coml and vapours [Type A/Type P boili	pination of organic gases

: Where hand contact with the product may occur the use of

Hand protection Remarks

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		gloves approved to relevant standards US: F739) made from the following ma suitable chemical protection. PVC, nec gloves Suitability and durability of a glo usage, e.g. frequency and duration of resistance of glove material, dexterity. from glove suppliers. Contaminated glo replaced. Personal hygiene is a key ele care. Gloves must only be worn on cle gloves, hands should be washed and of Application of a non-perfumed moistur For continuous contact we recommend breakthrough time of more than 240 m for > 480 minutes where suitable gloves short-term/splash protection we recom recognize that suitable gloves offering may not be available and in this case a time maybe acceptable so long as app and replacement regimes are followed a good predictor of glove resistance to dependent on the exact composition of Glove thickness should be typically gree depending on the glove make and mod	aterials may provide oprene or nitrile rubber ove is dependent on contact, chemical Always seek advice oves should be ement of effective hand an hands. After using dried thoroughly. izer is recommended. d gloves with inutes with preference es can be identified. For mend the same, but this level of protection a lower breakthrough propriate maintenance . Glove thickness is not a chemical as it is f the glove material. eater than 0.35 mm	
Eye protection	:	If material is handled such that it could protective eyewear is recommended.		
Skin and body protection	:	Skin protection is not ordinarily require work clothes. It is good practice to wear chemical res		
Thermal hazards	:	Not applicable		
Environmental exposure cor	ntro	bls		
General advice	:	Take appropriate measures to fulfill the relevant environmental protection legis contamination of the environment by for Chapter 6. If necessary, prevent undis being discharged to waste water. Was treated in a municipal or industrial was before discharge to surface water. Local guidelines on emission limits for must be observed for the discharge of vapour.	slation. Avoid bllowing advice given in ssolved material from te water should be te water treatment plant volatile substances	
SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES				
Appearance	:	Semi-solid at ambient temperature.		
Colour	:	black		
Odour	:	Slight hydrocarbon		
Odour Threshold	:	Data not available		

sion 2.2 pH		Revision Date 10.08.2016 Not applicable	Print Date 11.08.20
	•		
Drop point	·	184 °C / 363 °FMethod: IP 396	
Melting / freezing point		Data not available	
Initial boiling point and boiling range	:	Data not available	
Flash point	:	Method: ASTM D92	
Evaporation rate	:	Data not available	
Flammability (solid, gas)	:	Data not available	
Upper explosion limit	:	Typical 10 %(V)	
Lower explosion limit	:	Typical 1 %(V)	
Vapour pressure	:	< 0.5 Pa (20 °C / 68 °F) estimated value(s)	
Relative vapour density	:	> 1estimated value(s)	
Relative density	:	0.900 (15 °C / 59 °F)	
Density	:	900 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified	
Solubility(ies)			
Water solubility	:	negligible	
Solubility in other solvents	:	Data not available	
Partition coefficient: n- octanol/water	:	Pow: > 6(based on information on	similar products)
Auto-ignition temperature	:	> 320 °C / 608 °F	
Viscosity			
Viscosity, dynamic	:	Data not available	
Viscosity, kinematic	:	Not applicable	
Explosive properties	:	Not classified	
Oxidizing properties	:	Data not available	
Conductivity	:	This material is not expected to be	a static accumulator.
Decomposition temperature	:	Data not available	

Version 2.2	Revision Date 10.08.2016	Print Date 11.08.2016
SECTION 10. STABILITY AND	REACTIVITY	
Reactivity	: The product does not pose any fu addition to those listed in the follo	
Chemical stability	: Stable.	
Possibility of hazardous reactions	: Reacts with strong oxidising agen	ts.
Conditions to avoid	: Extremes of temperature and dire	ct sunlight.
Incompatible materials	: Strong oxidising agents.	
Hazardous decomposition products	: Hazardous decomposition produc during normal storage.	ts are not expected to form

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	: LD50 rat: > 5,000 mg/kg Remarks: Expected to be of low toxicity:
Acute inhalation toxicity	: Remarks: Not considered to be an inhalation hazard under normal conditions of use.
Acute dermal toxicity	: LD50 Rabbit: > 5,000 mg/kg Remarks: Expected to be of low toxicity:

Skin corrosion/irritation

Product:

Remarks: Expected to be slightly irritating., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Serious eye damage/eye irritation

Product:

Remarks: Expected to be slightly irritating.

Respiratory or skin sensitisation

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Product:

Remarks: Not expected to be a skin sensitiser.

Components:

Zinc dithiocarbamate:

Remarks: May cause an allergic skin reaction in sensitive individuals.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Not considered a mutagenic hazard.

Carcinogenicity

Product:

Remarks: Not expected to be carcinogenic.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Material	GHS/CLP Carcinogenicity Classification			
Highly refined mineral oil	No carcinogenicity classification.			

Reproductive toxicity

Product:

Remarks: Not expected to impair fertility., Not expected to be a developmental toxicant.

STOT - single exposure

Product:

Remarks: Not expected to be a hazard.

STOT - repeated exposure

Product:

Remarks: Not expected to be a hazard.

Aspiration toxicity

Product:

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Not considered an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION					
Basis for assessment	 Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).(LL/EL/IL50 expressed as the nominal amount of product required to prepare aqueous test extract). 				
Ecotoxicity					
Product:					
Toxicity to fish (Acute toxicity)	: Remarks: Expected to be harmful: LL/EL/IL50 10-100 mg/l				
Toxicity to crustacean (Acute toxicity)	: Remarks: Expected to be harmful: LL/EL/IL50 10-100 mg/l				
Toxicity to algae/aquatic plants (Acute toxicity)	: Remarks: Expected to be harmful: LL/EL/IL50 10-100 mg/l				
Toxicity to fish (Chronic	: Remarks: Data not available				
toxicity) Toxicity to crustacean (Chronic toxicity)	: Remarks: Data not available				
Toxicity to microorganisms (Acute toxicity)	: Remarks: Data not available				

Persistence and degradability

Product:

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Biodegradability	: Remarks: Expected to be not readily biodegradable., Major constituents are expected to be inherently biodegradable, but contains components that may persist in the environment.
Bioaccumulative potential	
Product:	
Bioaccumulation	: Remarks: Contains components with the potential to bioaccumulate.
Partition coefficient: n- octanol/water	: Pow: > 6Remarks: (based on information on similar products)
Mobility in soil	
Product:	
Mobility	 Remarks: Semi-solid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be mobile. Remarks: Floats on water.
Other adverse effects	
no data available <u>Product:</u>	
Additional ecological information	 Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities., Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential. Poorly soluble mixture., May cause physical fouling of aquatic organisms. Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Naste from residues :	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses
	Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Waste, spills or used product is dangerous waste.
Contaminated packaging	: Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional,

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	national, and local laws and regula	ations.
Local legislation Remarks	: Disposal should be in accordance national, and local laws and regula	
SECTION 14. TRANSPORT INFO	ORMATION	
National Regulations		
ADG Not regulated as a dangerou	s good	
nternational Regulations		
IATA-DGR Not regulated as a dangerou	s good	
IMDG-Code Not regulated as a dangerou	s good	
Fransport in bulk according to	Annex II of MARPOL 73/78 and the IB	C Code
Pollution category Ship type Product name Special precautions	 Not applicable Not applicable Not applicable Not applicable Not applicable 	
Special precautions for user		
Remarks	: Special Precautions: Refer to Cha for special precautions which a use needs to comply with in connection	er needs to be aware of or
Additional Information	: MARPOL Annex 1 rules apply for	bulk shipments by sea.
SECTION 15. REGULATORY IN		

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform	:	No poison schedule number allocated
Scheduling of Medicines and		
Poisons (SUSMP)		

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2011 based on Globally Harmonized Classification version 3.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011). Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code).

Other international regulations

The components of this product are reported in the following inventories:

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EINECS	: All components listed or polymer	exempt.
TSCA	: All components listed.	
AICS	: All components listed.	

SECTION 16. OTHER INFORMATION

Full text of H-Statements

H317May cause an allergic skin reaction.H400Very toxic to aquatic life.H410Very toxic to aquatic life with long lasting effects.H413May cause long lasting harmful effects to aquatic life.Full text of other abbreviations				
Aquatic AcuteAcute aquatic toxicityAquatic ChronicChronic aquatic toxicitySkin Sens.Skin sensitisation				
Abbreviations and Acro	nyms : The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.			
Date of preparation or re	eview : 10.08.2016			
Further information				
Other information	: A vertical bar () in the left margin indicates an amendment from the previous version.			

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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SECTION 1. PRODUCT AND COM		
Product name	Shell Gadus S3 T100 2	
Product code	001D8549	
Manufacturer or supplier's de	tails	
Supplier	 Viva Energy Australia Pty Ltd (Formerly: The Shell Company of A (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia 	Australia)
Telephone Telefax	: +61 (0)3 8823 4444 : +61 (0)3 8823 4800	
Emergency telephone number	: 1800 651 818 (Australia). ; POISC CENTRE: 13 11 26 (Australia).	INS INFORMATION
Recommended use of the che	emical and restrictions on use	
Recommended use	Automotive and industrial grease.	
SECTION 2. HAZARDS IDENTIFIC	ATION	
GHS Classification		
Based on available data this sul	bstance / mixture does not meet the c	lassification criteria.

GHS label elements	
Hazard pictograms	No Hazard Symbol required
Signal word :	No signal word
Hazard statements :	PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Precautionary statements	Prevention: No precautionary phrases.
	Response: No precautionary phrases.

Storage:

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Disposal:

No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Alkaryl amine	68411-46-1	Repr.2; H361	0.1 - 0.9
Zinc naphthenate	12001-85-3	Skin Sens.1B; H317 Eye Irrit.2; H319 Aquatic Chronic2; H411	0.1 - 0.9
Triazole derivative	91273-04-0	Skin Corr.1B; H314 Skin Sens.1A; H317 Aquatic Chronic1; H410 Aquatic Acute2; H401	0.01 - 0.09
Alkyl thiadiazole	13539-13-4	Skin Irrit.2; H315 Skin Sens.1A; H317 Acute Tox.4; H332 Aquatic Chronic4; H413	0.01 - 0.09

Hazardous components

For explanation of abbreviations see section 16.

:

SECTION 4. FIRST-AID MEASURES

If inhaled

No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.

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In case of skin contact	:	: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.	
		When using high pressure equip under the skin can occur. If high casualty should be sent immedia for symptoms to develop. Obtain medical attention even in wounds.	pressure injuries occur, the itely to a hospital. Do not wait
In case of eye contact	:	Flush eye with copious quantities Remove contact lenses, if preser rinsing. If persistent irritation occurs, obta	nt and easy to do. Continue
If swallowed	:	In general no treatment is necess are swallowed, however, get med	
Most important symptoms and effects, both acute and delayed	:	Oil acne/folliculitis signs and sym of black pustules and spots on th Ingestion may result in nausea, v	e skin of exposed areas.
		Local necrosis is evidenced by de tissue damage a few hours follow	
Protection of first-aiders	:	When administering first aid, ens appropriate personal protective e incident, injury and surroundings	equipment according to the
Notes to physician	:	Treat symptomatically.	
		High pressure injection injuries re- intervention and possibly steroid damage and loss of function. Because entry wounds are small seriousness of the underlying da determine the extent of involvem anaesthetics or hot soaks should can contribute to swelling, vasos surgical decompression, debride foreign material should be perfor anaesthetics, and wide exploration	therapy, to minimise tissue and do not reflect the mage, surgical exploration to ent may be necessary. Local be avoided because they pasm and ischaemia. Prompt ment and evacuation of med under general
		•	

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.

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Specific hazards during firefighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).
Hazchem Code	:	NONE
SECTION 6. ACCIDENTAL RELEA	٩SI	E MEASURES
Personal precautions, protective equipment and emergency procedures	:	Avoid contact with skin and eyes.
Environmental precautions	:	Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Methods and materials for containment and cleaning up	:	Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Additional advice	:	For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.

SECTION 7. HANDLING AND STORAGE

General Precautions	 Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Advice on safe handling	Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

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Version 5.6	Revision Date 21.03.2023 Properly dispose of any contaminated ra materials in order to prevent fires.	Print Date 22.03.2023 ags or cleaning
Avoidance of contact :	Strong oxidising agents.	
Storage		
Other data :	Keep container tightly closed and in a co place. Use properly labeled and closable conta	
	Store at ambient temperature.	
Packaging material :	Suitable material: For containers or cont steel or high density polyethylene. Unsuitable material: PVC.	ainer linings, use mild
Container Advice :	Polyethylene containers should not be e temperatures because of possible risk o	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	Australia. Workplace Exposure Standards for Airborne Contaminant s.
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

Components with workplace control parameters

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or

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	national methods may be available.	anual of Anchaical Mathe
http://www.cdc.gov/niosh/	onal Safety and Health (NIOSH), USA: M	anual of Analytical Metho
	Ith Administration (OSHA), USA: Samplir	ng and Analytical Method
http://www.osha.gov/		
	(HSE), UK: Methods for the Determinatio	n of Hazardous Substand
http://www.hse.gov.uk/ Institut für Arbeitsschutz Deut	tschen Gesetzlichen Unfallversicherung (IFA) Germany
http://www.dguv.de/inhalt/inde		,,, c
L'Institut National de Recherc	che et de Securité, (INRS), France http://v	www.inrs.fr/accueil
Engineering measures	: The level of protection and types of vary depending upon potential expo	
	controls based on a risk assessmer	nt of local circumstances.
	Appropriate measures include: Adequate ventilation to control airbo	orne concentrations
		one concentrations.
	Where material is heated, sprayed or greater potential for airborne concerts of the second statement o	
	General Information:	
	Define procedures for safe handling	and maintenance of
	controls.	
	Educate and train workers in the ha measures relevant to normal activiti product.	
	Ensure appropriate selection, testin	g and maintenance of
	equipment used to control exposure	
	equipment, local exhaust ventilation Drain down system prior to equipme	
	maintenance.	
	Retain drain downs in sealed storag	ge pending disposal or
	subsequent recycle. Always observe good personal hygi	
	washing hands after handling the m drinking, and/or smoking. Routinely protective equipment to remove cor	/ wash work clothing and
	contaminated clothing and footwear	
	Practice good housekeeping.	
	Due to the product's semi-solid con- mists and dusts is unlikely to occur.	
Personal protective equipm	nent	
Protective measures		
Personal protective equipme PPE suppliers.	nt (PPE) should meet recommended nati	onal standards. Check w
Respiratory protection	: No respiratory protection is ordinaril conditions of use.	
	In accordance with good industrial h precautions should be taken to avoit	

rsion 5.6	Revision Date 21.03.2023 Print Date 22.03.20
	If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worke health, select respiratory protection equipment suitable for th specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65° (149°F)].
Hand protection Remarks	: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubber gloves Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective har care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
	For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is n a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model.
Eye protection	: If material is handled such that it could be splashed into eye protective eyewear is recommended.
Skin and body protection	 Skin protection is not ordinarily required beyond standard work clothes. It is good practice to wear chemical resistant gloves.
Thermal hazards	: Not applicable
Environmental exposure co	ontrols
General advice	: Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given Section 6. If necessary, prevent undissolved material from

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	being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.
SECTION 9. PHYSICAL AND CHE	MICAL PROPERTIES
Appearance	: Semi-solid at ambient temperature.
Colour	: brown
Odour	: Slight hydrocarbon
Odour Threshold	: Data not available
рН	: Not applicable
Dropping point	: 250 °C / 482 °F Method: IP 396
Melting / freezing point	Not applicable
Initial boiling point and boiling range	: Data not available
Flash point	: Not applicable
Evaporation rate	: Data not available
Flammability (solid, gas)	: Not applicable
Flammability (liquids)	: Not classified as flammable but will burn.
Upper explosion limit	: Typical 10 %(V)
Lower explosion limit	: Typical 1 %(V)
Vapour pressure	: < 0.5 Pa (20 °C / 68 °F) estimated value(s)
Relative vapour density	: > 1estimated value(s)
Relative density	: 1.000 (15 °C / 59 °F)
Density	: 1,000 g/cm3 (15.0 °C / 59.0 °F) Method: Unspecified
Solubility(ies)	
Water solubility	: negligible
Solubility in other solvents	: Data not available
Partition coefficient: n-	: log Pow: > 6

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Version 5.6 octanol/water	Revision Date 21.03.2023 Pl (based on information on similar products)	rint Date 22.03.2023
Auto-ignition temperature	: > 320 °C / 608 °F	
Decomposition temperature	: Data not available	
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: Not applicable	
Explosive properties	: Classification Code: Not classified	
Oxidizing properties	: Data not available	
Conductivity	: This material is not expected to be a static	accumulator.
Particle size	: Data not available	

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Chemical stability	: Stable.
Possibility of hazardous reactions	: Reacts with strong oxidising agents.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidising agents.
Hazardous decomposition products	: No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	: LD50 rat: > 5,000 mg/kg

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	Remarks: Low toxicity Based on available data, the class	sification criteria are not met.
Acute inhalation toxicity	: Remarks: Based on available data are not met.	a, the classification criteria
Acute dermal toxicity	: LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity Based on available data, the class	sification criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Remarks: Not a skin sensitiser. Based on available data, the classification criteria are not met.

Components:

Triazole derivative:

Remarks: May cause an allergic skin reaction in sensitive individuals.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the

Shell Gadus S3 T100 2

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Material	GHS/CLP Carcinogenicity Classification
Highly refined mineral oil	No carcinogenicity classification.

Reproductive toxicity

Product:

Remarks: Based on available data, the classification criteria are not met., Not a developmental toxicant., Does not impair fertility.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment

: Ecotoxicological data have not been determined specifically for this product.

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	Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Ecotoxicity	
Product:	
Toxicity to fish (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to algae/aquatic plants (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to fish (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Toxicity to microorganisms (Acute toxicity)	: Remarks: Based on available data, the classification criteria are not met.
<u>Components:</u> Triazole derivative :	
M-Factor (Short-term (acute) aquatic hazard) M-Factor (Long-term (chronic) aquatic hazard)	: 1 : 1
Persistence and degradability	
Product:	
Biodegradability	 Remarks: Not readily biodegradable., Major constituents are inherently biodegradable, but contains components that may persist in the environment.
Bioaccumulative potential	
Product:	
Bioaccumulation	: Remarks: Contains components with the potential to bioaccumulate.

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octanol/water	products)	
Mobility in soil		
Product:		
Mobility	 Remarks: Semi-solid under most e it enters soil, it will adsorb to soil p mobile. Remarks: Floats on water. 	
Other adverse effects		
no data available Product:		
Additional ecological information	 Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential., Product is a mixture of non-volatile components, which will not be released to air in any significant quantities under normal conditions of use. Poorly soluble mixture., Causes physical fouling of aquatic organisms. Mineral oil does not cause chronic toxicity to aquatic organisms at concentrations less than 1 mg/l. 	
SECTION 13. DISPOSAL CON	SIDERATIONS	

Disposal methods

Waste from residues :	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water courses. Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand. MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides
	technical aspects at controlling pollutions from ships.
Contaminated packaging :	Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional,

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	national, and local laws and regula	ations.
Local legislation Remarks	: Disposal should be in accordance national, and local laws and regula	

SECTION 14. TRANSPORT INFORMATION

National Regulations

ADG

Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks

: Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform : No poison schedule number allocated Scheduling of Medicines and Poisons

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011).

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Other international regulations

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The components of	of this product are reported in the following invo	entories:
TSCA	: All components listed.	
AIIC	: Listed introduction	

SECTION 16. OTHER INFORMATION

Full text of H-Statements

H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H401	Toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
Full text of other abl	breviations
Acute Tox.	Acute toxicity
Aquatic Acute	Short-term (acute) aquatic hazard
Aquatic Chronic	Long-term (chronic) aquatic hazard
Eve Irrit	Eve irritation

Eye Irrit.	Eye irritation
Repr.	Reproductive toxicity
Skin Corr.	Skin corrosion
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitisation

Abbreviations and Acronyms

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships: n.o.s. - Not Otherwise Specified: Nch - Chilean Norm: NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical

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	uantitative) Structure Activity Relationship	
No 1907/2006 of the Eu	ropean Parliament and of the Council of	concerning the Registration,
Evaluation, Authorisation a	and Restriction of Chemicals; SADT - Self	-Accelerating Decomposition
Temperature; SDS - Safe	ty Data Sheet; TCSI - Taiwan Chemical	Substance Inventory; TDG -
Transportation of Dangero	us Goods; TECI - Thailand Existing Chemi	icals Inventory; TSCA - Toxic
Substances Control Act	(United States); UN - United Nations;	UNRTDG - United Nations
Recommendations on the	Transport of Dangerous Goods; vPvB	- Very Persistent and Very
Bioaccumulative; WHMIS -	 Workplace Hazardous Materials Informati 	ion System

Date of preparation or review : 21.03.2023

Further information

Other information

: A vertical bar (|) in the left margin indicates an amendment from the previous version.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

AU / EN

Shell Gadus S3 T220 2

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SECTION 1. PRODUCT AND CO	MP	ANY IDENTIFICATION	
Product name	:	Shell Gadus S3 T220 2	
Product code	:	001D8546	
Manufacturer or supplier's	dot	aile	
Supplier	:	Viva Energy Australia Pty Ltd (Formerly: The Shell Company of A (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia	Australia)
Telephone Telefax		+61 (0)3 8823 4444 +61 (0)3 8823 4800	
Emergency telephone number	:	1800 651 818 (Australia). ; POISC CENTRE: 13 11 26 (Australia).	ONS INFORMATION
Recommended use of the c	her	nical and restrictions on use	
Recommended use	:	Automotive and industrial grease.	
		TION	
SECTION 2. HAZARDS IDENTIFI	CA	TION	
GHS Classification			
Based on available data this	sub	stance / mixture does not meet the c	classification criteria.
GHS label elements			

	Response:
·····	Prevention: No precautionary phrases.
Precautionary statements	· ·
	Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Hazard statements	: PHYSICAL HAZARDS:
Signal word	: No signal word
Hazard pictograms	: No Hazard Symbol required

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Revision Date 21.03.2023 No precautionary phrases. Print Date 22.03.2023

Disposal:

No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (% w/w)			
Mercaptothiadiazole derivative	72676-55-2	Skin Sens.1; H317 Aquatic Chronic2; H411	0.1 - 0.9			
Alkaryl amine	68411-46-1	Repr.2; H361	0.1 - 0.9			

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASURES

In case of skin contact	 When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wai for symptoms to develop. Obtain medical attention even in the absence of apparent wounds. 	t
Most important symptoms and effects, both acute and delayed	: Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection.	
Notes to physician	 High pressure injection injuries require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function. Because entry wounds are small and do not reflect the 	

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	seriousness of the underlying dam determine the extent of involveme anaesthetics or hot soaks should b can contribute to swelling, vasospa surgical decompression, debridem foreign material should be perform anaesthetics, and wide exploration	nt may be necessary. Local be avoided because they asm and ischaemia. Prompt lent and evacuation of led under general

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.
Specific hazards during firefighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).
Hazchem Code	:	NONE

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Avoid contact with skin and eyes.
Environmental precautions	:	Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Methods and materials for containment and cleaning up	:	Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Additional advice	:	For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet.

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	For guidance on disposal of spilled material s this Safety Data Sheet.	ee Section 13 of
SECTION 7. HANDLING AND ST	ORAGE	
General Precautions	 Use local exhaust ventilation if there is risk of vapours, mists or aerosols. Use the information in this data sheet as input assessment of local circumstances to help de appropriate controls for safe handling, storage this material. 	t to a risk stermine
Advice on safe handling	 Avoid prolonged or repeated contact with skir Avoid inhaling vapour and/or mists. When handling product in drums, safety footw worn and proper handling equipment should I Properly dispose of any contaminated rags of materials in order to prevent fires. 	vear should be be used.
Avoidance of contact	: Strong oxidising agents.	
Storage		
Other data	 Keep container tightly closed and in a cool, w place. Use properly labeled and closable containers 	
	Store at ambient temperature.	
Packaging material	 Suitable material: For containers or container steel or high density polyethylene. Unsuitable material: PVC. 	linings, use mild
Container Advice	: Polyethylene containers should not be exposite temperatures because of possible risk of distribution of the statement of th	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	Australia. Workplace Exposure Standards for Airborne Contaminant s.

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Oil mist, mineral		Revision Da	ate 21.03.2023		nt Date 22.03.202
		ot Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
Oil mist, mineral	N	ot Assigned	TWA (Inhalable particulate	5 mg/m3	ACGIH
			matter)		
Biological occupational ex	posi	ire limits			
Biological Limit Values (BLV)	hav	e not been es	stablished for th	is material.	
Engineering measures	:		product's semi-s usts is unlikely t	olid consistency o occur.	generation of
Environmental exposure co	ontro	ols			
General advice	:	contaminatio	on. Prevent fror	nt to avoid enviro n spreading or ei and, earth, or oth	ntering drains,
CTION 9. PHYSICAL AND CH	IEMI	CAL PROPE	RTIES		
Appearance	:	Semi-solid a	at room tempera	ature.	
Colour	:	light brown			
Dropping point	:	260 °C / 500 Method: IP 3			
Melting point/freezing point		Data not ava	ailable		
Melting point/freezing point Boiling point	:	Data not ava Data not ava			
•••••••••	:		ailable		
Boiling point	:	Data not ava	ailable ble		
Boiling point Flash point	:	Data not ava Not applicat	ailable ble ailable		
Boiling point Flash point Vapour pressure	: :	Data not ava Not applicat Data not ava 1 (15.0 °C /	ailable ble ailable 59.0 °F) 3 (15.0 °C / 59.0)°F)	
Boiling point Flash point Vapour pressure Relative density	::	Data not ava Not applicat Data not ava 1 (15.0 °C / 1,000 kg/m3 Method: Una	ailable ble ailable 59.0 °F) 3 (15.0 °C / 59.0 specified) °F) milar products)	
Boiling point Flash point Vapour pressure Relative density Density Partition coefficient: n-	::	Data not ava Not applicat Data not ava 1 (15.0 °C / 1,000 kg/m3 Method: Una	ailable ble ailable 59.0 °F) 3 (15.0 °C / 59.0 specified		
Boiling point Flash point Vapour pressure Relative density Density Partition coefficient: n- octanol/water	::	Data not ava Not applicat Data not ava 1 (15.0 °C / 1,000 kg/m3 Method: Una	ailable ble ailable 59.0 °F) 3 (15.0 °C / 59.0 specified 5 iformation on si		

SECTION 10. STABILITY AND REACTIVITY

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Reactivity	: The product does not pose any fur addition to those listed in the follow	
Chemical stability	: Stable.	
Possibility of hazardous reactions	: Reacts with strong oxidising agent	S.
Conditions to avoid	: Extremes of temperature and direct	t sunlight.
Incompatible materials	: Strong oxidising agents.	
Hazardous decomposition products	: No decomposition if stored and ap	plied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	 LD50 rat: > 5,000 mg/kg Remarks: Low toxicity Based on available data, the classification criteria are not met.
Acute inhalation toxicity	: Remarks: Based on available data, the classification criteria are not met.
Acute dermal toxicity	 LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

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Respiratory or skin sensiti	sation	
Product:		
Remarks: Not a skin se Based on available data	nsitiser. a, the classification criteria are not met.	

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Material	GHS/CLP Carcinogenicity Classification
Highly refined mineral oil	No carcinogenicity classification.

Reproductive toxicity

Product:

Remarks: Based on available data, the classification criteria are not met., Not a developmental toxicant., Does not impair fertility.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

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Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment	 Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Ecotoxicity	
Product:	
Toxicity to fish (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to algae/aquatic plants (Acute toxicity)	: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to fish (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.

Shell Gadus S3 T220 2

Version 3.14	Revision Date 21.03.2023 Print Date 22.03.2023
Toxicity to microorganisms (Acute toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Persistence and degradability	
Product:	
Biodegradability	 Remarks: Not readily biodegradable., Major constituents are inherently biodegradable, but contains components that may persist in the environment.
Bioaccumulative potential	
Product:	
Bioaccumulation	: Remarks: Contains components with the potential to bioaccumulate.
Partition coefficient: n- octanol/water	 log Pow: > 6Remarks: (based on information on similar products)
Mobility in soil	
Product:	
Mobility	 Remarks: Semi-solid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be mobile. Remarks: Floats on water.
Other adverse effects	
no data available <u>Product:</u>	
Additional ecological information	 Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential., Product is a mixture of non-volatile components, which will not be released to air in any significant quantities under normal conditions of use. Poorly soluble mixture., Causes physical fouling of aquatic organisms. Mineral oil does not cause chronic toxicity to aquatic organisms at concentrations less than 1 mg/l.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water

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	courses. Do not dispose of tank water bottoms by drain into the ground. This will result in a contamination. Waste arising from a spillage or tank cle disposed of in accordance with prevailin preferably to a recognised collector or c competence of the collector or contractor established beforehand.	soil and groundwater eaning should be ng regulations, eontractor. The
	MARPOL - see International Convention Pollution from Ships (MARPOL 73/78) v technical aspects at controlling pollution	vhich provides
Contaminated packaging :	Dispose in accordance with prevailing re- to a recognized collector or contractor. the collector or contractor should be est Disposal should be in accordance with a national, and local laws and regulations	The competence of ablished beforehand. applicable regional,
Local legislation Remarks :	Disposal should be in accordance with a national, and local laws and regulations	

SECTION 14. TRANSPORT INFORMATION

National Regulations

ADG

Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform : No poison schedule number allocated

Version 3.14	Revision Date 21.03.2023	Print Date 22.03.2023
Scheduling of Medici	nes and	
Poisons		
Other international	regulations	
The components of	this product are reported in the following in	ventories:
TSCA	: All components listed.	

: Listed introduction

SECTION 16. OTHER INFORMATION

AIIC

Full text of H-Statements

H317	May cause an allergic skin reaction.
H361	Suspected of damaging fertility or the unborn child.
H411 Toxic to aquatic life with long lasting effect	
Full text of other abb	previations
Aquatic Chronic	Long-term (chronic) aquatic hazard

Repr.Reproductive toxicitySkin Sens.Skin sensitisation

Abbreviations and Acronyms

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG -Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations

Shell Gadus S3 T220 2

Version 3.14Revision Date 21.03.2023Print Date 22.03.2023Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very
Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date of preparation or review : 21.03.2023

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Shell Gadus S3 V220C 2

Version 6.7		Revision Date 14.02.2023	Print Date 15.02.2023		
SECTION 1. PRODUCT AND CO	SECTION 1. PRODUCT AND COMPANY IDENTIFICATION				
Product name	:	Shell Gadus S3 V220C 2			
Product code	:	001D8425			
Manufacturer or supplier's	det	ails			
Supplier		Viva Energy Australia Pty Ltd (Formerly: The Shell Company of Au (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia	ıstralia)		
Telephone		: +61 (0)3 8823 4444			
Telefax		: +61 (0)3 8823 4800			
Emergency telephone number		: 1800 651 818 (Australia). ; POISON CENTRE: 13 11 26 (Australia).	S INFORMATION		
Recommended use of the o	chei	nical and restrictions on use			
Recommended use	:	Automotive and industrial grease.			

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification	
Eye irritation	: Category 2A
GHS label elements	
Hazard pictograms	
Signal word	: Warning
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: H319 Causes serious eye irritation. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Precautionary statements	: Prevention: P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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	Response: P305 + P351 + P338 IF IN EYES for several minutes. Remove con easy to do. Continue rinsing. P337 + P313 If eye irritation pers attention.	tact lenses, if present and
	Storage: No precautionary phrases.	
	Disposal: No precautionary phrases.	
	Additional Information: P264 Wash hands thoroughly aft	er handling.
Hazardous components w Contains Lithium complex Contains Zinc Naphthenat		

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Lithium complex thickener	12007-60-2	Acute Tox.4; H302 Eye Dam.1; H318 Repr.2; H361d	1 - 2.9
Zinc naphthenate	12001-85-3	Skin Sens.1B; H317 Eye Irrit.2; H319 Aquatic Chronic2; H411	1 - 1.49
Alkyl thiadiazole	13539-13-4	Skin Irrit.2; H315 Skin Sens.1A; H317 Acute Tox.4; H332	0 - < 0.09

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			Aquatic Chronic4; H413		
	Alkaryl amine	68411-46-1	Repr.2; H361	0.1 - 2.9	

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASU	RES
General advice	: Not expected to be a health hazard when used under normal conditions.
If inhaled	: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
In case of skin contact	 Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
	When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.
In case of eye contact	 Immediately flush eye(s) with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Transport to the nearest medical facility for additional treatment.
If swallowed	: In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Most important symptoms and effects, both acute and delayed	 Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea. Not considered to be an inhalation hazard under normal conditions of use. Possible respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. No specific hazards under normal use conditions. Skin irritation signs and symptoms may include a burning sensation, redness, or swelling. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection.
Protection of first-aiders	: When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the

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	incident, injury and surroundings.	
Notes to physician	: IMMEDIATE TREATMENT IS EXT Call a doctor or poison control cen Treat symptomatically.	
	High pressure injection injuries req intervention and possibly steroid th damage and loss of function. Because entry wounds are small a seriousness of the underlying dam determine the extent of involvemer anaesthetics or hot soaks should b can contribute to swelling, vasospa surgical decompression, debridem foreign material should be perform anaesthetics, and wide exploration	herapy, to minimise tissue age, surgical exploration to ht may be necessary. Local be avoided because they asm and ischaemia. Prompt ent and evacuation of ed under general

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.
Specific hazards during firefighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).
Hazchem Code		NONE

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions,	: Avoid contact with skin and eyes.
protective equipment and	
emergency procedures	

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Environmental precautions	:	Use appropriate containment to avoid e contamination. Prevent from spreading ditches or rivers by using sand, earth, o barriers.	or entering drains,
Methods and materials for containment and cleaning up	:	Shovel into a suitable clearly marked c reclamation in accordance with local re	
Additional advice	:	For guidance on selection of personal p see Section 8 of this Safety Data Shee For guidance on disposal of spilled ma this Safety Data Sheet.	t

SECTION 7. HANDLING AND STORAGE

General Precautions	 Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposa this material. 	al of
Advice on safe handling	 Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. 	e
Avoidance of contact	: Strong oxidising agents.	
Storage		
Other data	: Keep container tightly closed and in a cool, well-ventilated	
	place. Use properly labeled and closable containers.	
Packaging material	Use properly labeled and closable containers.	nild

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type	Control	Basis
5/17				800001006664

V	ersion 6.7	Revision Da	ate 14.02.2023	Print Da	te 15.02.2023
			(Form of exposure)	parameters / Permissible concentration	
	Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL
	Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	Australia. Workplace Exposure Standards for Airborne Contaminant s.
	Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
	Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp

L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

Engineering measures	 The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations.
	Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
	General Information:

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	Define procedures for safe handlin controls.	g and maintenance of
	Educate and train workers in the ha	azards and control
	measures relevant to normal activi product.	ties associated with this
	Ensure appropriate selection, testin equipment used to control exposur equipment, local exhaust ventilatio	e, e.g. personal protective
	Drain down system prior to equipm maintenance.	
	Retain drain downs in sealed stora subsequent recycle.	ge pending disposal or
	Always observe good personal hyg washing hands after handling the r drinking, and/or smoking. Routinel protective equipment to remove co contaminated clothing and footwea Practice good housekeeping.	naterial and before eating, ly wash work clothing and ntaminants. Discard
	Due to the product's semi-solid cor mists and dusts is unlikely to occur	

Personal protective equipment

Protective measures

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory protection :	No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65°C (149°F)].
Hand protection	
Remarks	Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubber gloves Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand

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	care. Gloves must only be worn on c gloves, hands should be washed and Application of a non-perfumed moist	I dried thoroughly.
	For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with prefe for > 480 minutes where suitable gloves can be identifi short-term/splash protection we recommend the same recognize that suitable gloves offering this level of prot may not be available and in this case a lower breakthro time maybe acceptable so long as appropriate mainter and replacement regimes are followed. Glove thickness a good predictor of glove resistance to a chemical as it dependent on the exact composition of the glove mate Glove thickness should be typically greater than 0.35 r depending on the glove make and model.	
Eye protection	: Wear full face shield if splashes are I	ikely to occur.
Skin and body protection	: Wear chemical resistant gloves/gaun risk of splashing, also wear an apron	
Thermal hazards	: Not applicable	

Environmental exposure controls

General advice : Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Section 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Semi-solid at ambient temperature.
Colour	:	red
Odour	:	Slight hydrocarbon
Odour Threshold	:	Data not available
рН	:	Not applicable
Dropping point	:	240 °C / 464 °F Method: IP 396
Melting / freezing point		Data not available
Initial boiling point and boiling range	:	Data not available

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Flash point	: Not applicable	
Evaporation rate	: Data not available	
Flammability (solid, gas)	: Not applicable	
Flammability (liquids)	: Not classified as flammable but will	burn.
Upper explosion limit	: Typical 10 %(V)	
Lower explosion limit	: Typical 1 %(V)	
Vapour pressure	: < 0.5 Pa (20 °C / 68 °F) estimated value(s)	
Relative vapour density	: > 1estimated value(s)	
Relative density	: 1.000 (15 °C / 59 °F)	
Density	: 1,000 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified	
Solubility(ies)		
Water solubility	: negligible	
Solubility in other solvents	: Data not available	
Partition coefficient: n- octanol/water	: log Pow: > 6 (based on information on similar pro	oducts)
Auto-ignition temperature	: > 320 °C / 608 °F	
Decomposition temperature	: Data not available	
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: Not applicable	
Explosive properties	: Classification Code: Not classified	
Oxidizing properties	: Data not available	
Conductivity	: This material is not expected to be a	a static accumulator.
Particle size	: Data not available	

SECTION 10. STABILITY AND REACTIVITY

Reactivity	itv
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: The product does not pose any further reactivity hazards in

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	addition to those listed in the follow	wing sub-paragraph.
Chemical stability	: Stable.	
Possibility of hazardous reactions	: Reacts with strong oxidising agent	s.
Conditions to avoid	: Extremes of temperature and direct	ct sunlight.
Incompatible materials	: Strong oxidising agents.	
Hazardous decomposition products	: No decomposition if stored and ap	plied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	: LD50 rat: > 5,000 mg/kg Remarks: Low toxicity Based on available data, the classification criteria are not met.
Acute inhalation toxicity	: Remarks: Based on available data, the classification criteria are not met.
Acute dermal toxicity	 LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Causes serious eye irritation.

Respiratory or skin sensitisation

Product:

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Remarks: Not a skin sensitiser.		

Based on available data, the classification criteria are not met.

Remarks: Experimental data has shown that the concentration of potentially sensitising components present in this product does not induce skin sensitisation.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Material	GHS/CLP Carcinogenicity Classification
Highly refined mineral oil	No carcinogenicity classification.

Reproductive toxicity

Product:

Remarks: Not a developmental toxicant., Does not impair fertility., Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

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Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

I	Basis for assessment		Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Ecot	oxicity		
<u> </u>	Product:		
	Toxicity to fish (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
	Toxicity to crustacean (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
	Toxicity to algae/aquatic plants (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
	Toxicity to fish (Chronic toxicity)	:	Remarks: Based on available data, the classification criteria are not met.
	Toxicity to crustacean (Chronic toxicity)	:	Remarks: Based on available data, the classification criteria are not met.

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Toxicity to microorganisms (Acute toxicity)	Remarks: Based on available data, the classification criteria are not met.
Persistence and degradability	
Product:	
Biodegradability	 Remarks: Not readily biodegradable., Major constituents are inherently biodegradable, but contains components that may persist in the environment.
Bioaccumulative potential	
Product:	
Bioaccumulation	 Remarks: Contains components with the potential to bioaccumulate.
Partition coefficient: n- octanol/water	 log Pow: > 6Remarks: (based on information on similar products)
Mobility in soil	
Product:	
Mobility	 Remarks: Semi-solid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be mobile. Remarks: Floats on water.
Other adverse effects	
no data available <u>Product:</u>	
Additional ecological information	 Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential., Product is a mixture of non-volatile components, which will not be released to air in any significant quantities under normal conditions of use. Poorly soluble mixture., Causes physical fouling of aquatic organisms. Mineral oil does not cause chronic toxicity to aquatic organisms at concentrations less than 1 mg/l.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.

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		Waste product should not be allowed to contaminate so ground water, or be disposed of into the environment. Waste, spills or used product is dangerous waste. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand. Do not dispose of tank water bottoms by allowing them drain into the ground. This will result in soil and groundw contamination.			
		MARPOL - see International Con Pollution from Ships (MARPOL 7 technical aspects at controlling po	3/78) which provides		
Contaminated packaging	:	Dispose in accordance with preva to a recognized collector or contra the collector or contractor should Disposal should be in accordance national, and local laws and regul	actor. The competence of be established beforehand. e with applicable regional,		
Local legislation Remarks	:	Disposal should be in accordance national, and local laws and regul			

SECTION 14. TRANSPORT INFORMATION

National Regulations

ADG

Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks

: Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

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SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform : No poison schedule number allocated Scheduling of Medicines and Poisons

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011). Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Other international regulations

The components of this product are reported in the following inventories:

REACH	:	Not established.
TSCA	:	All components listed.
AIIC	:	Listed introduction

SECTION 16. OTHER INFORMATION

Full text of H-Statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
Full text of other abl	breviations
Acute Tox.	Acute toxicity
Aquatic Chronic	Long-term (chronic) aquatic hazard
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
Repr.	Reproductive toxicity
Skin Irrit.	Skin irritation

Skin Sens. Skin sensitisation

Abbreviations and Acronyms

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AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG -Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date of preparation or review : 14.02.2023

Further information

Training advice		Provide adequate information, instruction and training for operators.
Other information		A vertical bar () in the left margin indicates an amendment from the previous version.
Sources of key data used to compile the Safety Data Sheet	s H	The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU IUCLID date base, EC 1272 regulation, etc).

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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Shell Gadus S3 V220C 1

Version 9.2	Revision Date 31.01.2023	Print Date 01.02.2023			
SECTION 1. PRODUCT AND COMP	SECTION 1. PRODUCT AND COMPANY IDENTIFICATION				
Product name :	Shell Gadus S3 V220C 1				
Product code :	001D8424				
Manufacturer or supplier's det	tails				
Supplier :	Viva Energy Australia Pty Ltd (Formerly: The Shell Company of Aust (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia	ralia)			
	: +61 (0)3 8823 4444				
Telefax	: +61 (0)3 8823 4800				
Emergency telephone number	: 1800 651 818 (Australia). ; POISONS CENTRE: 13 11 26 (Australia).	INFORMATION			
Recommended use of the che	mical and restrictions on use				
Recommended use :	Automotive and industrial grease.				

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification	
Eye irritation	: Category 2A
GHS label elements	
Hazard pictograms	
Signal word	: Warning
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: H319 Causes serious eye irritation. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Precautionary statements	: Prevention: P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

ersion 9.2	Revision Date 31.01.2023	Print Date 01.02.2023
	Response: P305 + P351 + P338 IF IN EYES for several minutes. Remove com easy to do. Continue rinsing. P337 + P313 If eye irritation persi attention.	tact lenses, if present and
	Storage: No precautionary phrases.	
	Disposal: No precautionary phrases.	
	Additional Information: P264 Wash hands thoroughly afte	er handling.
Hazardous components wh Contains Lithium complex Contains Zinc Naphthenate		
Other hazards which do	not result in classification	

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Lithium complex thickener	12007-60-2	Acute Tox.4; H302 Eye Dam.1; H318 Repr.2; H361d	0 - < 3
Zinc naphthenate	12001-85-3	Skin Sens.1B; H317 Eye Irrit.2; H319 Aquatic Chronic2; H411	0.1 - 1.49
Alkyl thiadiazole	13539-13-4	Skin Irrit.2; H315 Skin Sens.1A; H317 Acute Tox.4; H332	0 - < 0.1

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			Aquatic Chronic4; H413		
	Alkaryl amine	68411-46-1	Repr.2; H361	0.1 - < 3]

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASU	RES
General advice	: Not expected to be a health hazard when used under normal conditions.
If inhaled	: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
In case of skin contact	 Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
	When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.
In case of eye contact	 Immediately flush eye(s) with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Transport to the nearest medical facility for additional treatment.
If swallowed	: In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Most important symptoms and effects, both acute and delayed	 Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea. Not considered to be an inhalation hazard under normal conditions of use. Possible respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. No specific hazards under normal use conditions. Skin irritation signs and symptoms may include a burning sensation, redness, or swelling. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection.
Protection of first-aiders	: When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the

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Version 9.2	Revision Date 31.01.2023 incident, injury and surroundings.	Print Date 01.02.2023
Notes to physician	: IMMEDIATE TREATMENT IS EXT Call a doctor or poison control cent Treat symptomatically.	ter for guidance.
	High pressure injection injuries req intervention and possibly steroid th damage and loss of function. Because entry wounds are small a seriousness of the underlying dam determine the extent of involvemer anaesthetics or hot soaks should b can contribute to swelling, vasospa surgical decompression, debridem foreign material should be perform anaesthetics, and wide exploration	herapy, to minimise tissue age, surgical exploration to ht may be necessary. Local be avoided because they asm and ischaemia. Prompt ent and evacuation of ed under general

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.
Specific hazards during firefighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).
Hazchem Code		NONE

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions,	: Avoid contact with skin and eyes.
protective equipment and	
emergency procedures	

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Environmental precautions	:	: Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.	
Methods and materials for containment and cleaning up	:	Shovel into a suitable clearly marked c reclamation in accordance with local re	
Additional advice	:	For guidance on selection of personal see Section 8 of this Safety Data Shee For guidance on disposal of spilled ma this Safety Data Sheet.	t.

SECTION 7. HANDLING AND STORAGE

General Precautions	pours, mists or a se the information sessment of local	entilation if there is risk of inhalation of erosols. in this data sheet as input to a risk circumstances to help determine for safe handling, storage and disposal of
Advice on safe handling	void inhaling vapo hen handling proc orn and proper ha	duct in drums, safety footwear should be ndling equipment should be used. any contaminated rags or cleaning
Avoidance of contact	rong oxidising age	ents.
Storage		
Other data	ace.	tly closed and in a cool, well-ventilated d and closable containers.
	ore at ambient ter	mperature.
Packaging material	uitable material: F eel or high density nsuitable material	
Container Advice		ners should not be exposed to high use of possible risk of distortion.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type	Control	Basis
5/17				800001010389

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			(Form of exposure)	parameters / Permissible concentration	
	Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL
	Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	Australia. Workplace Exposure Standards for Airborne Contaminant s.
	Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
	Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp

L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

Engineering measures	 The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations.
	Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
	General Information:

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	Define procedures for safe handlin controls.	g and maintenance of
	Educate and train workers in the ha	azards and control
	measures relevant to normal activi product.	ties associated with this
	Ensure appropriate selection, testin equipment used to control exposur equipment, local exhaust ventilatio	e, e.g. personal protective
	Drain down system prior to equipm maintenance.	ent break-in or
	Retain drain downs in sealed stora subsequent recycle.	ge pending disposal or
	Always observe good personal hyg washing hands after handling the r drinking, and/or smoking. Routinel protective equipment to remove co contaminated clothing and footwea Practice good housekeeping.	naterial and before eating, ly wash work clothing and ntaminants. Discard
	Due to the product's semi-solid cor mists and dusts is unlikely to occur	

Personal protective equipment

Protective measures

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory protection :	No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65°C (149°F)].
Hand protection	
Remarks :	Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubber gloves Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand

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	care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model.	
Eye protection	: Wear full face shield if splashes	are likely to occur.
Skin and body protection	: Wear chemical resistant gloves/ risk of splashing, also wear an a	
Thermal hazards	: Not applicable	

Environmental exposure controls

General advice : Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Section 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Semi-solid at ambient temperature.	
Colour	: red	
Odour	: Slight hydrocarbon	
Odour Threshold	: Data not available	
рН	: Not applicable	
Dropping point	: 240 °C / 464 °F Method: IP 396	
Melting / freezing point	Not applicable	
Initial boiling point and boiling range	: Data not available	

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Flash point	: Not applicable
Evaporation rate	: Data not available
Flammability (solid, gas)	: Not applicable
Flammability (liquids)	: Not classified as flammable but will burn.
Upper explosion limit	: Typical 10 %(V)
Lower explosion limit	: Typical 1 %(V)
Vapour pressure	: < 0.5 Pa (20 °C / 68 °F) estimated value(s)
Relative vapour density	: > 1estimated value(s)
Relative density	: 0.900 (15 °C / 59 °F)
Density	: 900 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified
Solubility(ies)	
Water solubility	: negligible
Solubility in other solvents	: Data not available
Partition coefficient: n- octanol/water	: log Pow: > 6 (based on information on similar products)
Auto-ignition temperature	: > 320 °C / 608 °F
Decomposition temperature	: Data not available
Viscosity	
Viscosity, dynamic	: Data not available
Viscosity, kinematic	: Not applicable
Explosive properties	: Classification Code: Not classified
Oxidizing properties	: Data not available
Conductivity	: This material is not expected to be a static accumulator.
Particle size	: Data not available

SECTION 10. STABILITY AND REACTIVITY

Reactivity

: The product does not pose any further reactivity hazards in

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	addition to those listed in the follow	ving sub-paragraph.
Chemical stability	: Stable.	
Possibility of hazardous reactions	: Reacts with strong oxidising agent	S.
Conditions to avoid	: Extremes of temperature and direct	ct sunlight.
Incompatible materials	: Strong oxidising agents.	
Hazardous decomposition products	: No decomposition if stored and ap	plied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	: LD50 rat: > 5,000 mg/kg Remarks: Low toxicity Based on available data, the classification criteria are not met.
Acute inhalation toxicity	: Remarks: Based on available data, the classification criteria are not met.
Acute dermal toxicity	: LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Causes serious eye irritation.

Respiratory or skin sensitisation

Product:

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Remarks: Not a skin sensitiser. Based on available data, the classification criteria are not met.

Remarks: Experimental data has shown that the concentration of potentially sensitising components present in this product does not induce skin sensitisation.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Material	GHS/CLP Carcinogenicity Classification	
Highly refined mineral oil	No carcinogenicity classification.	

Reproductive toxicity

Product:

Remarks: Not a developmental toxicant., Does not impair fertility., Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

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Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Ba	isis for assessment		Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Ecotox	licity		
Pro	oduct:		
	xicity to fish (Acute kicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
	oxicity to crustacean (Acute kicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
	xicity to algae/aquatic ants (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
	xicity to fish (Chronic kicity)		Remarks: Based on available data, the classification criteria are not met.
	xicity to crustacean hronic toxicity)		Remarks: Based on available data, the classification criteria are not met.

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Toxicity to microorganisms (Acute toxicity)	: Remarks: Based on available data, the classification criteria are not met.
Persistence and degradability	
Product:	
Biodegradability	: Remarks: Not readily biodegradable., Major constituents are inherently biodegradable, but contains components that may persist in the environment.
Bioaccumulative potential	
Product:	
Bioaccumulation	: Remarks: Contains components with the potential to bioaccumulate.
Partition coefficient: n- octanol/water	: log Pow: > 6Remarks: (based on information on similar products)
Mobility in soil	
Product:	
Mobility	 Remarks: Semi-solid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be mobile. Remarks: Floats on water.
Other adverse effects	
no data available <u>Product:</u>	
Additional ecological information	 Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential., Product is a mixture of non-volatile components, which will not be released to air in any significant quantities under normal conditions of use. Poorly soluble mixture., Causes physical fouling of aquatic organisms. Mineral oil does not cause chronic toxicity to aquatic organisms at concentrations less than 1 mg/l.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.

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		Waste product should not be allow ground water, or be disposed of in Waste, spills or used product is da Waste arising from a spillage or ta disposed of in accordance with pro- preferably to a recognised collector competence of the collector or cor established beforehand. Do not dispose of tank water botto drain into the ground. This will res- contamination.	nto the environment. angerous waste. ank cleaning should be evailing regulations, or or contractor. The ntractor should be oms by allowing them to
	I	MARPOL - see International Conv Pollution from Ships (MARPOL 73 echnical aspects at controlling po	8/78) which provides
Contaminated packaging	t t I	Dispose in accordance with preva o a recognized collector or contra he collector or contractor should l Disposal should be in accordance national, and local laws and regula	ctor. The competence of be established beforehand. with applicable regional,
Local legislation Remarks		Disposal should be in accordance national, and local laws and regula	

SECTION 14. TRANSPORT INFORMATION

National Regulations

ADG

Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks

: Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

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SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform : No poison schedule number allocated Scheduling of Medicines and Poisons

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011). Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Other international regulations

The components of this product are reported in the following inventories:

REACH	: Not all components listed.
TSCA	: All components listed.
AICS	: Listed introduction

SECTION 16. OTHER INFORMATION

Full text of H-Statements

	H302	Harmful if swallowed.	
	H315	Causes skin irritation.	
	H317	May cause an allergic skin reaction.	
	H318	Causes serious eye damage.	
	H319	Causes serious eye irritation.	
	H332	Harmful if inhaled.	
	H361	Suspected of damaging fertility or the unborn child.	
	H361d	Suspected of damaging the unborn child.	
	H411	Toxic to aquatic life with long lasting effects.	
	H413	May cause long lasting harmful effects to aquatic life.	
Full text of other abbreviations			
	Acute Tox.	Acute toxicity	
	Aquatic Chronic	Long-term (chronic) aquatic hazard	
	Eye Dam.	Serious eye damage	
	Eye Irrit.	Eye irritation	
	Repr.	Reproductive toxicity	

Skin irritation

Skin sensitisation

Abbreviations and Acronyms

Skin Irrit.

Skin Sens.

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AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG -Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date of preparation or review : 31.01.2023

Further information

Training advice	:	Provide adequate information, instruction and training for operators.
Other information	:	A vertical bar () in the left margin indicates an amendment from the previous version.
Sources of key data used to compile the Safety Data Sheet	:	The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU IUCLID date base, EC 1272 regulation, etc).

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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AU / EN

Version 2.1 Revision Date 15.10.2016 Print Date 16.10.201					
SECTION 1. PRODUCT AND COMPANY IDENTIFICATION					
Product name	: Shell Gadus S3 V460XD 1				
Product code	: 001D8434				
Manufacturer or supplier's o	details				
Supplier Telephone	 Viva Energy Australia Pty Ltd (Formerly: The Shell Company of A (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia +61 (0)3 8823 4444 ; 	Australia)			
Telefax	: +61 (0)3 8823 4800				
Emergency telephone number	: 1800 651 818 (Australia). POISON CENTRE: 13 11 26 (Australia).	IS INFORMATION			
Recommended use of the cl	hemical and restrictions on use				
Recommended use	: Automotive and industrial grease.				
SECTION 2. HAZARDS IDENTIFICATION					

GHS Classification		
Chronic aquatic toxicity	:	Category 3
GHS label elements		
Hazard pictograms	:	No Hazard Symbol required
Signal word	:	No signal word
Hazard statements	:	PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	:	Prevention: P273 Avoid release to the environment. Response: No precautionary phrases. Storage: No precautionary phrases. Disposal:
		•

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 P501 Dispose of contents/ container to an approved waste disposal plant.
 Pint Date 16.10.2016

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives.
		The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346.

Hazardous components

Chemical name	CAS-No.	Classification	Concentration [%]
Zinc naphthenate	12001-85-3	Skin Irrit.2; H315 Eye Irrit.2A; H319 Aquatic Acute1; H400 Aquatic Chronic1; H410	< 2
Trimethyldihydroquino line, homopolymer	26780-96-1	Aquatic Chronic3; H412	< 2

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASURES

General advice	Not expected to be a health hazard when used under no conditions.	ormal
If inhaled	No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.	
In case of skin contact	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.	'n
	When using high pressure equipment, injection of produ under the skin can occur. If high pressure injuries occur, casualty should be sent immediately to a hospital. Do no for symptoms to develop. Obtain medical attention even in the absence of apparen wounds.	, the ot wait

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In case of eye contact	: Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.	_
If swallowed	: In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.	
Most important symptoms and effects, both acute and delayed	: Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.	
	Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection.	
Protection of first-aiders	: When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.	
Notes to physician	: Treat symptomatically.	
	High pressure injection injuries require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anaesthetics, and wide exploration is essential.	

SECTION 5. FIRE-FIGHTING MEASURES

Unsuitable extinguishing : Do not use water in a jet. media	able extinguishing media	: Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.	
	v v	: Do not use water in a jet.	
 Specific hazards during firefighting Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds. 	•	A complex mixture of airborne solid and liquid particulates a gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs.	
Specific extinguishing : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.	U		
Special protective equipment : Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained	• • • •	gloves are to be worn; chemical resistant suit is indicated if	

Version 2.1	Revision Date 15.10.2016Print Date 16.10.2016Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).
Hazchem Code	: NONE
SECTION 6. ACCIDENTAL RELE	ASE MEASURES
Personal precautions, protective equipment and emergency procedures	: Avoid contact with skin and eyes.
Environmental precautions	: Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Methods and materials for containment and cleaning up	: Shovel into a suitable clearly marked container for disposal or reclamation in accordance with local regulations.
Additional advice	 For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet.

SECTION 7. HANDLING AND STORAGE

General Precautions :	Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Advice on safe handling :	Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.
Avoidance of contact :	Strong oxidising agents.
Storage	
Other data :	Keep container tightly closed and in a cool, well-ventilated place. Use properly labeled and closable containers. Store at ambient temperature.

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Packaging material	: Suitable material: For containers or steel or high density polyethylene. Unsuitable material: PVC.	container linings, use mild
Container Advice	: Polyethylene containers should not temperatures because of possible ri	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	AU OEL
Oil mist, mineral	Not Assigned	TWA ((inhalable fraction))	5 mg/m3	US. ACGIH Threshold Limit Values
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	Australia. Workplace Exposure Standards for Airborne Contaminant s.
Oil mist, mineral	Not Assigned Not Assigned	TWA (Mist) TWA (Inhalable fraction)	5 mg/m3 5 mg/m3	OSHA Z-1 ACGIH

Components with workplace control parameters

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp

L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

sion 2.1	Revision Date 15.10.2016	Print Date 16.10.201
Engineering measures	: The level of protection and types vary depending upon potential ex controls based on a risk assessm	posure conditions. Select
	Appropriate measures include:	
	Adequate ventilation to control air	borne concentrations.
	Where material is heated, sprayed greater potential for airborne conc	
	General Information: Define procedures for safe handli	ng and maintenance of
	controls. Educate and train workers in the l measures relevant to normal activ	
	product. Ensure appropriate selection, test equipment used to control exposu equipment, local exhaust ventilati	ure, e.g. personal protective
	Drain down system prior to equip maintenance.	ment break-in or
	Retain drain downs in sealed stor subsequent recycle.	age pending disposal or
	Always observe good personal hy washing hands after handling the drinking, and/or smoking. Routine	material and before eating,
	protective equipment to remove c contaminated clothing and footwe Practice good housekeeping.	ontaminants. Discard
	Due to the product's semi-solid comists and dusts is unlikely to occu	
Personal protective equipm	ent	
Protective measures		
Personal protective equipmer PPE suppliers.	nt (PPE) should meet recommended na	ational standards. Check wi
Respiratory protection	 No respiratory protection is ordina conditions of use. In accordance with good industria 	
	precautions should be taken to av If engineering controls do not mai	void breathing of material. ntain airborne
	concentrations to a level which is health, select respiratory protection specific conditions of use and me	on equipment suitable for th eting relevant legislation.
	Check with respiratory protective	
	Where air-filtering respirators are appropriate combination of mask	

Hand protection	
Remarks	: Where hand contact with the product may occur the use of

gloves approved to relevant standards (e.g. Europe: EN37 US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubb gloves Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be
replaced. Personal hygiene is a key element of effective h care. Gloves must only be worn on clean hands. After usir gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommende For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preferen for > 480 minutes where suitable gloves can be identified. short-term/splash protection we recommend the same, bu recognize that suitable gloves offering this level of protecti may not be available and in this case a lower breakthroug time maybe acceptable so long as appropriate maintenand and replacement regimes are followed. Glove thickness is a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model.
Eye protection : If material is handled such that it could be splashed into ey protective eyewear is recommended.
Skin and body protection: Skin protection is not ordinarily required beyond standard work clothes. It is good practice to wear chemical resistant gloves.
Thermal hazards : Not applicable
Environmental exposure controls
General advice : Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice give Chapter 6. If necessary, prevent undissolved material fror being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment p before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containi vapour.
SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES
Appearance : Semi-solid at ambient temperature.
Colour : black
Odour : Slight hydrocarbon
Odour Threshold : Data not available

sion 2.1 pH		Revision Date 15.10.2016 Not applicable	Print Date 16.10.20
	•		
Drop point	÷	250 °C / 482 °FMethod: IP 396	
Melting / freezing point		Data not available	
Initial boiling point and boiling range	:	Data not available	
Flash point	:	Not applicable	
Evaporation rate	:	Data not available	
Flammability (solid, gas)	:	Data not available	
Upper explosion limit	:	Typical 10 %(V)	
Lower explosion limit	:	Typical 1 %(V)	
Vapour pressure	:	< 0.5 Pa (20 °C / 68 °F) estimated value(s)	
Relative vapour density	:	> 1estimated value(s)	
Relative density	:	0.900 (15 °C / 59 °F)	
Density	:	900 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified	
Solubility(ies)			
Water solubility	:	negligible	
Solubility in other solvents	:	Data not available	
Partition coefficient: n- octanol/water	:	Pow: > 6(based on information on	similar products)
Auto-ignition temperature	:	> 320 °C / 608 °F	
Viscosity			
Viscosity, dynamic	:	Data not available	
Viscosity, kinematic	:	Not applicable	
Explosive properties	:	Not classified	
Oxidizing properties	:	Data not available	
Conductivity	:	This material is not expected to be	a static accumulator.
Decomposition temperature	:	Data not available	

Version 2.1	Revision Date 15.10.2016	Revision Date 15.10.2016 Print Date 16.10.2016		
SECTION 10. STABILITY AND REACTIVITY				
Reactivity	: The product does not pose any fur addition to those listed in the follow	,		
Chemical stability	: Stable.			
Possibility of hazardous reactions	: Reacts with strong oxidising agent	ts.		
Conditions to avoid	: Extremes of temperature and dire	et sunlight.		
Incompatible materials	: Strong oxidising agents.			
Hazardous decomposition products	: Hazardous decomposition product during normal storage.	is are not expected to form		

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	: LD50 rat: > 5,000 mg/kg Remarks: Expected to be of low toxicity:
Acute inhalation toxicity	: Remarks: Not considered to be an inhalation hazard under normal conditions of use.
Acute dermal toxicity	: LD50 Rabbit: > 5,000 mg/kg Remarks: Expected to be of low toxicity:

Skin corrosion/irritation

Product:

Remarks: Expected to be slightly irritating., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Serious eye damage/eye irritation

Product:

Remarks: Expected to be slightly irritating.

Respiratory or skin sensitisation

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Product:

Remarks: Not expected to be a skin sensitiser.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Not considered a mutagenic hazard.

Carcinogenicity

Product:

Remarks: Not expected to be carcinogenic.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Material	GHS/CLP Carcinogenicity Classification
Highly refined mineral oil	No carcinogenicity classification.

Reproductive toxicity

Product:

Remarks: Not expected to impair fertility., Not expected to be a developmental toxicant.

STOT - single exposure

Product:

Remarks: Not expected to be a hazard.

:

STOT - repeated exposure

Product:

Remarks: Not expected to be a hazard.

Aspiration toxicity

Product:

Not considered an aspiration hazard.

Further information

rsion 2.1	Revision Date 15.10.2016	Print Date 16.10.201
Product:		
concentration of such harmful i	ntain harmful impurities that have ac mpurities will depend on use and the al., ALL used grease should be hand ible.	y may present risks to healt
Remarks: High pressure injecti product is not surgically remove	on of product into the skin may lead t ed.	o local necrosis if the
Remarks: Slightly irritating to re	espiratory system.	
CTION 12. ECOLOGICAL INFO	RMATION	
Basis for assessment	: Ecotoxicological data have not be for this product. Information given is based on a k and the ecotoxicology of similar p Unless indicated otherwise, the d representative of the product as a individual component(s).(LL/EL/IL nominal amount of product requir extract).	nowledge of the component roducts. ata presented is whole, rather than for .50 expressed as the
toxicity		
Product:		
Toxicity to fish (Acute toxicity)	: Remarks: Expected to be harmfu LL/EL/IL50 10-100 mg/l	:
Toxicity to crustacean (Acute toxicity)	: Remarks: Expected to be harmfu LL/EL/IL50 10-100 mg/l	:
Toxicity to algae/aquatic plants (Acute toxicity)	: Remarks: Expected to be harmfu LL/EL/IL50 10-100 mg/l	::
Toxicity to fish (Chronic toxicity)	: Remarks: Data not available	
Toxicity to crustacean	: Remarks: Data not available	
(Chronic toxicity) Toxicity to microorganisms (Acute toxicity)	: Remarks: Data not available	
Components:		
Zinc naphthenate :		
	: 1	

Product:

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Biodegradability :	Remarks: Expected to be not readily bi constituents are expected to be inherer contains components that may persist	ntly biodegradable, but
Bioaccumulative potential		
Product:		
Bioaccumulation :	Remarks: Contains components with the bioaccumulate.	e potential to
Partition coefficient: n- : octanol/water	Pow: > 6Remarks: (based on information	on on similar products)
Mobility in soil		
Product:		
Mobility :	Remarks: Semi-solid under most enviro it enters soil, it will adsorb to soil particl mobile. Remarks: Floats on water.	
Other adverse effects		
no data available Product:		
Additional ecological : information	Product is a mixture of non-volatile com expected to be released to air in any si Not expected to have ozone depletion p photochemical ozone creation potential potential. Poorly soluble mixture., May cause phy organisms. Mineral oil is not expected to cause any aquatic organisms at concentrations less	y chronic effects to

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses
	Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Waste, spills or used product is dangerous waste.
Contaminated packaging	: Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional,

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	national, and local laws and regula	ations.
Local legislation Remarks	: Disposal should be in accordance national, and local laws and regula	
SECTION 14. TRANSPORT INFO	RMATION	
National Regulations		
ADG Not regulated as a dangerous	good	
International Regulations		
IATA-DGR Not regulated as a dangerous	good	
IMDG-Code Not regulated as a dangerous	good	
Transport in bulk according to A	nnex II of MARPOL 73/78 and the IB	C Code
Pollution category Ship type Product name Special precautions	 Not applicable Not applicable Not applicable Not applicable Not applicable 	
Special precautions for user		
Remarks	: Special Precautions: Refer to Cha for special precautions which a us needs to comply with in connectio	er needs to be aware of or

Additional Information : MARPOL Annex 1 rules apply for bulk shipments by sea.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform	:	No poison schedule number allocated
Scheduling of Medicines and		
Poisons (SUSMP)		

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2011 based on Globally Harmonized Classification version 3.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011).

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code).

Other international regulations

The components of this product are reported in the following inventories:

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EINECS	: All components listed or polymer exe	empt.
TSCA	: All components listed.	
AICS	: All components listed.	

SECTION 16. OTHER INFORMATION

Full text of H-Statements

H315Causes skin irritation.H319Causes serious eye irritation.H400Very toxic to aquatic life.H410Very toxic to aquatic life with long lasting effects.H412Harmful to aquatic life with long lasting effects.Full text of other abbreviations		
Aquatic Acute Aquatic Chronic Eye Irrit. Skin Irrit.	Acute aquatic toxicity Chronic aquatic toxicity Eye irritation Skin irritation	
Abbreviations and Acro	nyms : The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.	
Date of preparation or review : 15.10.2016		
Further information		
Other information	: A vertical bar () in the left margin indicates an amendment from the previous version.	

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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Product name	: Shell Gadus S5 T460 1.5	
Product code	: 001D8547	
Manufacturer or supplier	's details	
Supplier	: Viva Energy Australia Pty (Formerly: The Shell Comp (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia	
Telephone Telefax	: +61 (0)3 8823 4444 : +61 (0)3 8823 4800	
Emergency telephone number	: 1800 651 818 (Australia). CENTRE: 13 11 26 (Austr	
Recommended use of th	e chemical and restrictions on u	se
Recommended use	: Automotive and industrial	grease.

Based on available data this substance / mixture does not meet the classification criteria.

GHS label elements	
Hazard pictograms	: No Hazard Symbol required
Signal word	: No signal word
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Precautionary statements	: Prevention: No precautionary phrases. Response: No precautionary phrases. Storage:

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Revision Date 03.03.2023 No precautionary phrases. Print Date 04.03.2023

Disposal:

No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.Used grease may contain harmful impurities.High-pressure injection under the skin may cause serious damage including local necrosis.Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature

A lubricating grease containing polyolefins, synthetic esters and additives.

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Amine phosphate	91745-46-9	Flam. Liq.4; H227 Acute Tox.4; H302 Skin Sens.1; H317 Aquatic Chronic2; H411 Eye Irrit.2; H319	0.1 - 0.9
Mercaptothiadiazole derivative	72676-55-2	Skin Sens.1; H317 Aquatic Chronic2; H411	0.1 - 0.9
Alkaryl amine	68411-46-1	Repr.2; H361	0.5 - 2.9

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASURES

If inhaled :	No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
In case of skin contact :	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent

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In case of eye contact	:	Flush eye with copious quantities of v Remove contact lenses, if present an rinsing. If persistent irritation occurs, obtain m	d easy to do. Continue
If swallowed	:	In general no treatment is necessary are swallowed, however, get medical	
Most important symptoms and effects, both acute and delayed	:	Oil acne/folliculitis signs and sympton of black pustules and spots on the sk Ingestion may result in nausea, vomit	in of exposed areas.
		Local necrosis is evidenced by delaye tissue damage a few hours following	
Protection of first-aiders	:	When administering first aid, ensure tappropriate personal protective equip incident, injury and surroundings.	
Notes to physician	:	Treat symptomatically.	
		High pressure injection injuries requir intervention and possibly steroid there damage and loss of function. Because entry wounds are small and seriousness of the underlying damag determine the extent of involvement r anaesthetics or hot soaks should be a can contribute to swelling, vasospash surgical decompression, debridement foreign material should be performed anaesthetics, and wide exploration is	apy, to minimise tissue do not reflect the e, surgical exploration to may be necessary. Local avoided because they n and ischaemia. Prompt t and evacuation of under general

SECTION 5. FIRE-FIGHTING MEASURES

Suitable	extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitab media	le extinguishing	:	Do not use water in a jet.
Specific I firefightin	nazards during g	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
Specific of methods	extinguishing	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

ersion 4.4	Revision Date 03.03.2023	Print Date 04.03.2023
Special protective equipment for firefighters		al resistant suit is indicated if uct is expected. Self-Contained worn when approaching a fire in ighter's clothing approved to
Hazchem Code	: NONE	
CTION 6. ACCIDENTAL RELEA	SE MEASURES	
Personal precautions, protective equipment and emergency procedures	: Avoid contact with skin and ey	ves.
Environmental precautions	: Use appropriate containment to contamination. Prevent from s ditches or rivers by using sand barriers.	preading or entering drains,
Methods and materials for containment and cleaning up	: Prevent from spreading or ent rivers by using sand, earth, or	
Additional advice	: For guidance on selection of p see Section 8 of this Safety Da For guidance on disposal of sp this Safety Data Sheet.	

CTION 7. HANDLING AND STORAGE

General Precautions	 Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Advice on safe handling	 Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.
Avoidance of contact	Strong oxidising agents.
Storage	
Other data	 Keep container tightly closed and in a cool, well-ventilated place. Use properly labeled and closable containers.

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	Store at ambient temperature.	
Packaging material	: Suitable material: For containers of steel or high density polyethylene Unsuitable material: PVC.	
Container Advice	: Polyethylene containers should no temperatures because of possible	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Biological occupational exposure limits

Biological Limit Values (BLV) have not been established for this material.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp

L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

Engineering measures :	The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations.
	Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
	General Information: Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of

ersion 4.4	Revision Date 03.03.2023	Print Date 04.03.2023
	equipment used to control expos equipment, local exhaust ventilat Drain down system prior to equip maintenance. Retain drain downs in sealed sto subsequent recycle. Always observe good personal h washing hands after handling the drinking, and/or smoking. Routir protective equipment to remove of contaminated clothing and footw Practice good housekeeping. Due to the product's semi-solid of mists and dusts is unlikely to occ	tion. bment break-in or brage pending disposal or bygiene measures, such as be material and before eating, hely wash work clothing and contaminants. Discard ear that cannot be cleaned.
Personal protective equipn	nent	
Protective measures		
Personal protective equipme PPE suppliers.	ent (PPE) should meet recommended r	national standards. Check with
Respiratory protection	 No respiratory protection is ordin conditions of use. In accordance with good industri- precautions should be taken to a If engineering controls do not ma concentrations to a level which is health, select respiratory protective specific conditions of use and me Check with respiratory protective Where air-filtering respirators are appropriate combination of mask Select a filter suitable for the con and vapours and particles [Type (149°F)]. 	al hygiene practices, avoid breathing of material. aintain airborne s adequate to protect worker ion equipment suitable for the eeting relevant legislation. e equipment suppliers. e suitable, select an s and filter. nbination of organic gases
Hand protection		
Remarks	: Where hand contact with the pro gloves approved to relevant stan US: F739) made from the followi suitable chemical protection. PVG gloves Suitability and durability of usage, e.g. frequency and durati resistance of glove material, dex from glove suppliers. Contamina replaced. Personal hygiene is a l care. Gloves must only be worn gloves, hands should be washed Application of a non-perfumed m	dards (e.g. Europe: EN374, ng materials may provide C, neoprene or nitrile rubber of a glove is dependent on on of contact, chemical terity. Always seek advice ted gloves should be key element of effective hand on clean hands. After using I and dried thoroughly.
	For continuous contact we recon breakthrough time of more than 2	

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		for > 480 minutes where suitable glo short-term/splash protection we reco recognize that suitable gloves offerin may not be available and in this cas time maybe acceptable so long as a and replacement regimes are follow a good predictor of glove resistance dependent on the exact composition Glove thickness should be typically depending on the glove make and m	ommend the same but ng this level of protection e a lower breakthrough ppropriate maintenance ed. Glove thickness is not to a chemical as it is of the glove material. greater than 0.35 mm
Eye protection	:	If material is handled such that it couprotective eyewear is recommended	
Skin and body protection	:	Skin protection is not ordinarily required work clothes. It is good practice to wear chemical	·
Thermal hazards	:	Not applicable	
Environmental exposure cor	ntro	bls	
General advice	:	Take appropriate measures to fulfill relevant environmental protection le contamination of the environment by Section 6. If necessary, prevent und being discharged to waste water. W treated in a municipal or industrial w before discharge to surface water. Local guidelines on emission limits f must be observed for the discharge vapour.	gislation. Avoid v following advice given in dissolved material from aste water should be aste water treatment plant or volatile substances
SECTION 9. PHYSICAL AND CHE	MI	CAL PROPERTIES	
Appearance	:	Semi-solid at ambient temperature.	
Colour	:	light brown	
Odour	:	Slight hydrocarbon	
Odour Threshold	:	Data not available	
рН	:	Not applicable	
Dropping point	:	250 °C / 482 °F Method: IP 396	
Melting point/freezing point		Not applicable	
Initial boiling point and boiling range	:	Data not available	
Flash point	:	Not applicable	
Evaporation rate	:	Data not available	

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Flammability (solid, gas)	: Not applicable	
Flammability (liquids)	: Not classified as flammable but will	burn.
Upper explosion limit	: Typical 10 %(V)	
Lower explosion limit	: Typical 1 %(V)	
Vapour pressure	: < 0.5 Pa (20 °C / 68 °F) estimated value(s)	
Relative vapour density	: > 1estimated value(s)	
Relative density	: 1.000 (15.0 °C / 59.0 °F)	
Density	: 1,000 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified	
Solubility(ies)		
Water solubility	: negligible	
Solubility in other solvents	: Data not available	
Partition coefficient: n- octanol/water	: log Pow: > 6 (based on information on similar pro	oducts)
Auto-ignition temperature	: > 320 °C / 608 °F	
Decomposition temperature	: Data not available	
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: Not applicable	
Explosive properties	: Classification Code: Not classified	
Oxidizing properties	: Data not available	
Conductivity	: This material is not expected to be a	a static accumulator.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.	
Chemical stability	: Stable.	
Possibility of hazardous	: Reacts with strong oxidising agents.	

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reactions Conditions to avoid	: Extremes of temperature and dire	ct sunlight.
Incompatible materials	: Strong oxidising agents.	
Hazardous decomposition products	: No decomposition if stored and ap	oplied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	: LD50 rat: > 5,000 mg/kg Remarks: Low toxicity Based on available data, the classification criteria are not met.
Acute inhalation toxicity	: Remarks: Based on available data, the classification criteria are not met.
Acute dermal toxicity	 LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Components:

Amine phosphate:

Remarks: Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

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Product:

Remarks: Not a skin sensitiser. Based on available data, the classification criteria are not met.

Components:

Amine phosphate:

Remarks: Experimental data has shown that the concentration of potentially sensitising components present in this product does not induce skin sensitisation. May cause an allergic skin reaction in sensitive individuals.

Chronic toxicity

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Material	GHS/CLP Carcinogenicity Classification
Amine phosphate	No carcinogenicity classification.
Mercaptothiadiazole derivative	No carcinogenicity classification.
Alkaryl amine	No carcinogenicity classification.

Reproductive toxicity

Product:

Remarks: Based on available data, the classification criteria are not met., Not a developmental toxicant., Does not impair fertility.

STOT - single exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

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STOT - repeated exposure

Product:

Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:

Not an aspiration hazard.

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

	Basis for assessment :	Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Eco	toxicity	
	Product:	
	Toxicity to fish (Acute : toxicity)	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
	Toxicity to crustacean (Acute : toxicity)	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
	Toxicity to algae/aquatic : plants (Acute toxicity)	Remarks: LL/EL/IL50 > 100 mg/I Practically non toxic: Based on available data, the classification criteria are not met.

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Toxicity to fish (Chronic toxicity)	: Remarks: Based on available dat are not met.	ta, the classification criteria
Toxicity to crustacean (Chronic toxicity)	: Remarks: Based on available dat are not met.	ta, the classification criteria
Toxicity to microorganisms (Acute toxicity)	: Remarks: Based on available dat are not met.	ta, the classification criteria
Persistence and degradability		
Product:		
Biodegradability	: Remarks: Not readily biodegrada inherently biodegradable, but cor persist in the environment.	
Bioaccumulative potential		
Product:		
Bioaccumulation	: Remarks: Contains components bioaccumulate.	with the potential to
Partition coefficient: n- octanol/water	: log Pow: > 6Remarks: (based on products)	information on similar
Mobility in soil		
Product:		
Mobility	: Remarks: Semi-solid under most it enters soil, it will adsorb to soil mobile. Remarks: Floats on water.	
Other adverse effects		
no data available Product:		
Additional ecological information	 Does not have ozone depletion p ozone creation potential or globa is a mixture of non-volatile compore released to air in any significant of conditions of use. Poorly soluble mixture., Causes p organisms. 	l warming potential., Product onents, which will not be quantities under normal

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to

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	 determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water courses. Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand. 	
	MARPOL - see International Cor Pollution from Ships (MARPOL 7 technical aspects at controlling p	/3/78) which provides
Contaminated packaging	: Dispose in accordance with prev to a recognized collector or contr the collector or contractor should Disposal should be in accordanc national, and local laws and regu	actor. The competence of be established beforehand. with applicable regional,
Local legislation Remarks	: Disposal should be in accordanc national, and local laws and regu	

SECTION 14. TRANSPORT INFORMATION

National Regulations

ADG

Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks

: Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

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SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform : No poison schedule number allocated Scheduling of Medicines and Poisons

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011).

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Other international regulations

The components of this product are reported in the following inventories:

TSCA	:	All components listed.
AIIC	:	All components listed.

SECTION 16. OTHER INFORMATION

Full text of H-Statements

H227	Combustible liquid.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H361	Suspected of damaging fertility or the unborn child.
H411	Toxic to aquatic life with long lasting effects.
Full text of other ab	breviations
Acute Tox.	Acute toxicity
Aquatic Chronic	Long-term (chronic) aquatic hazard
Evo Irrit	Evo irritation

Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
Repr.	Reproductive toxicity
Skin Sens.	Skin sensitisation

Abbreviations and Acronyms

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule;

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ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System: GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association: IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance: PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG -Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date of preparation or review : 03.03.2023

Further information

Other information

: A vertical bar (|) in the left margin indicates an amendment from the previous version.

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