



Main characteristics and properties of the materials :

- High as quenched hardness
- Low dimensional movement or distortion after hardening
- Hardens from a relatively low hardening temperature
- Good machinability

Typical Applications:

- Blanking Dies
- Gauges
- Form Tools
- Taps
- Punches
- Dies
- Gauge Blocks
- Jigs & Fixtures

Nominal chemical composition

- Carbon 0.95%
- Manganese 1.2%
- Chromium 0.50%
- Tungsten 0.50%
- Silicon 0.25%
- Vanadium 0.20%
- S & P up to 0.035% max.

O1 is a medium alloyed oil hardening steel with excellent cutting force and toughness.

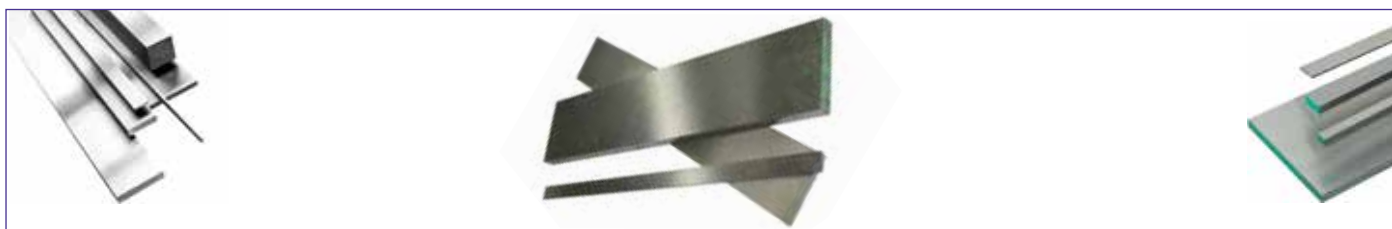
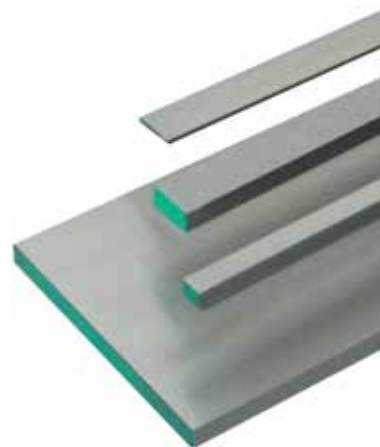
The excellent dimensional stability reduces distortion and the possibility of cracking during heat treatment.

Supplied in the annealed condition, the precision tolerances minimise additional costly tool room machining.

Ground Flat Stock provides toolmakers with a decarburisation free surface, plus high wear resistance after heat treatment, making it ideal for a multitude of uses and applications: dies, press tools, punches, gauges, cams, jigs, machining knives and marking devices.

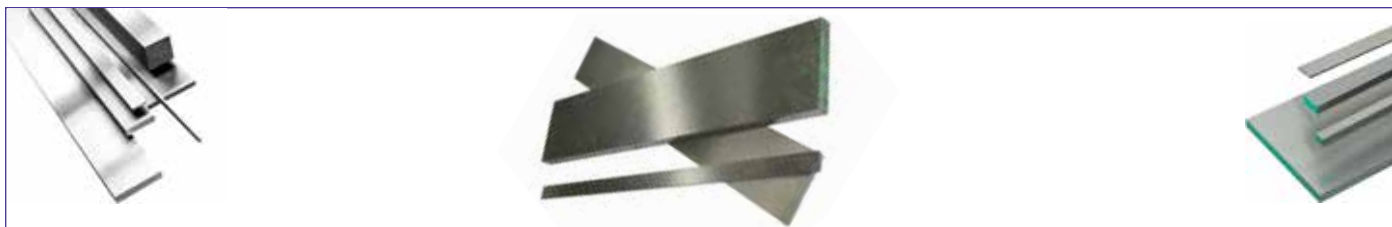
Hardness as supplied: 229 Brinall max Tensile Strength: 45 Tons / sq. in.

Hales stock a comprehensive range of metric Ground Flat Stock in 500mm lengths. 1 metre lengths also available.

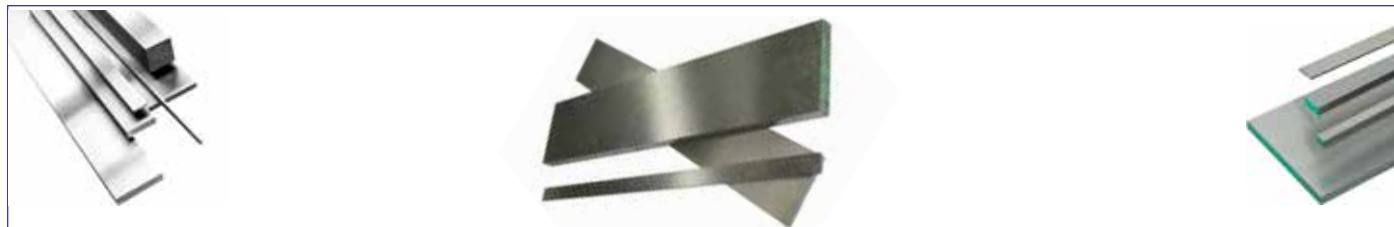


Part Number	Description	Part Number	Description	Part Number	Description
GM01010	1 X 10 X 500 Gauge Plate	GM01075	1 X 75 X 500 Gauge Plate	GM015015M	1.5 X 15 X 1000 Gauge Plate
GM01010M	1 X 10 X 1000 Gauge Plate	GM01075M	1 X 75 X 1000 Gauge Plate	GM015020	1.5 X 20 X 500 Gauge Plate
GM01015	1 X 15 X 500 Gauge Plate	GM01080	1 X 80 X 500 Gauge Plate	GM015025	1.5 X 25 X 500 Gauge Plate
GM01020	1 X 20 X 500 Gauge Plate	GM01100	1 X 100 X 500 Gauge Plate	GM015025M	1.5 X 25 X 1000 Gauge Plate
GM01020M	1 X 20 X 1000 Gauge Plate	GM01100M	1 X 100 X 1000 Gauge Plate	GM015030	1.5 X 30 X 500 Gauge Plate
GM01025	1 X 25 X 500 Gauge Plate	GM01125	1 X 125 X 500 Gauge Plate	GM015030M	1.5 X 30 X 1000 Gauge Plate
GM01030	1 X 30 X 500 Gauge Plate	GM01125M	1 X 125 X 1000 Gauge Plate	GM015040	1.5 X 40 X 500 Gauge Plate
GM01030M	1 X 30 X 1000 Gauge Plate	GM01150	1 X 150 X 500 Gauge Plate	GM015050	1.5 X 50 X 500 Gauge Plate
GM01040	1 X 40 X 500 Gauge Plate	GM01150M	1 X 150 X 1000 Gauge Plate	GM015050M	1.5 X 50 X 1000 Gauge Plate
GM01040M	1 X 40 X 1000 Gauge Plate	GM01200	1 X 200 X 500 Gauge Plate	GM015060	1.5 X 60 X 500 Gauge Plate
GM01050	1 X 50 X 500 Gauge Plate	GM01250	1 X 250 X 500 Gauge Plate	GM015060M	1.5 X 60 X 1000 Gauge Plate
GM01050M	1 X 50 X 1000 Gauge Plate	GM01300	1 X 300 X 500 Gauge Plate	GM015075	1.5 X 75 X 500 Gauge Plate
GM01060	1 X 60 X 500 Gauge Plate	GM015010	1.5 X 10 X 500 Gauge Plate	GM015075M	1.5 X 75 X 1000 Gauge Plate
GM01060M	1 X 60 X 1000 Gauge Plate	GM015015	1.5 X 15 X 500 Gauge Plate	GM015080	1.5 X 80 X 500 Gauge Plate

Gauge Plate



Part Number	Description	Part Number	Description	Part Number	Description
GM015080M	1.5 X 80 X 1000 Gauge Plate	GM05250M	5 X 250 X 1000 Gauge Plate	GM08015M	8 X 15 X 1000 Gauge Plate
GM015100	1.5 X 100 X 500 Gauge Plate	GM05300	5 X 300 X 500 Gauge Plate	GM08020	8 X 20 X 500 Gauge Plate
GM015100M	1.5 X 100 X 1000 Gauge Plate	GM0600	6mm Sq X 500 Gauge Plate	GM08020M	8 X 20 X 1000 Gauge Plate
GM015125	1.5 X 125 X 500 Gauge Plate	GM06010	6 X 10 X 500 Gauge Plate	GM08025	8 X 25 X 500 Gauge Plate
GM015125M	1.5 X 125 X 1000 Gauge Plate	GM06010M	6 X 10 X 1000 Gauge Plate	GM08025M	8 X 25 X 1000 Gauge Plate
GM015150	1.5 X 150 X 500 Gauge Plate	GM06015	6 X 15 X 500 Gauge Plate	GM08030	8 X 30 X 500 Gauge Plate
GM015150M	1.5 X 150 X 1000 Gauge Plate	GM05250	5 X 250 X 500 Gauge Plate	GM08030M	8 X 30 X 1000 Gauge Plate
GM015200	1.5 X 200 X 500 Gauge Plate	GM05250M	5 X 250 X 1000 Gauge Plate	GM08040	8 X 40 X 500 Gauge Plate
GM015200M	1.5 X 200 X 1000 Gauge Plate	GM05300	5 X 300 X 500 Gauge Plate	GM08040M	8 X 40 X 1000 Gauge Plate
GM015250	1.5 X 250 X 500 Gauge Plate	GM0600	6mm Sq X 500 Gauge Plate	GM08050	8 X 50 X 500 Gauge Plate
GM015300	1.5 X 300 X 500 Gauge Plate	GM06010	6 X 10 X 500 Gauge Plate	GM08050M	8 X 50 X 1000 Gauge Plate
GM02010	2 X 10 X 500 Gauge Plate	GM06010M	6 X 10 X 1000 Gauge Plate	GM08060	8 X 60 X 500 Gauge Plate
GM02010M	2 X 10 X 1000 Gauge Plate	GM06015	6 X 15 X 500 Gauge Plate	GM08060M	8 X 60 X 1000 Gauge Plate
GM02015	2 X 15 X 500 Gauge Plate	GM06015M	6 X 15 X 1000 Gauge Plate	GM08075	8 X 75 X 500 Gauge Plate
GM02015M	2 X 15 X 1000 Gauge Plate	GM06020	6 X 20 X 500 Gauge Plate	GM08075M	8 X 75 X 1000 Gauge Plate
GM02020	2 X 20 X 500 Gauge Plate	GM06020M	6 X 20 X 1000 Gauge Plate	GM08080	8 X 80 X 500 Gauge Plate
GM02020M	2 X 20 X 1000 Gauge Plate	GM06025	6 X 25 X 500 Gauge Plate	GM08080M	8 X 80 X 1000 Gauge Plate
GM02025	2 X 25 X 500 Gauge Plate	GM06025M	6 X 25 X 1000 Gauge Plate	GM08100	8 X 100 X 500 Gauge Plate
GM02025M	2 X 25 X 1000 Gauge Plate	GM06030	6 X 30 X 500 Gauge Plate	GM08100M	8 X 100 X 1000 Gauge Plate
GM02030	2 X 30 X 500 Gauge Plate	GM06030M	6 X 30 X 1000 Gauge Plate	GM08125	8 X 125 X 500 Gauge Plate
GM02030M	2 X 30 X 1000 Gauge Plate	GM06040	6 X 40 X 500 Gauge Plate	GM08125M	8 X 125 X 1000 Gauge Plate
GM02040	2 X 40 X 500 Gauge Plate	GM06040M	6 X 40 X 1000 Gauge Plate	GM08150	8 X 150 X 500 Gauge Plate
GM02040M	2 X 40 X 1000 Gauge Plate	GM06050	6 X 50 X 500 Gauge Plate	GM08150M	8 X 150 X 1000 Gauge Plate
GM02050	2 X 50 X 500 Gauge Plate	GM06050M	6 X 50 X 1000 Gauge Plate	GM08200	8 X 200 X 500 Gauge Plate
GM02050M	2 X 50 X 1000 Gauge Plate	GM06060	6 X 60 X 500 Gauge Plate	GM08200M	8 X 200 X 1000 Gauge Plate
GM02060	2 X 60 X 500 Gauge Plate	GM06060M	6 X 60 X 1000 Gauge Plate	GM08250	8 X 250 X 500 Gauge Plate
GM02060M	2 X 60 X 1000 Gauge Plate	GM06075	6 X 75 X 500 Gauge Plate	GM08250M	8 X 250 X 1000 Gauge Plate
GM02075	2 X 75 X 500 Gauge Plate	GM06075M	6 X 75 X 1000 Gauge Plate	GM08300	8 X 300 X 500 Gauge Plate
GM02075M	2 X 75 X 1000 Gauge Plate	GM06080	6 X 80 X 500 Gauge Plate	GM1000	10mmsq X 500 Gauge Plate
GM02080	2 X 80 X 500 Gauge Plate	GM06080M	6 X 80 X 1000 Gauge Plate	GM10015	10 X 15 X 500 Gauge Plate
GM02080M	2 X 80 X 1000 Gauge Plate	GM06100	6 X 100 X 500 Gauge Plate	GM10015M	10 X 15 X 1000 Gauge Plate
GM05075M	5 X 75 X 1000 Gauge Plate	GM06100M	6 X 100 X 1000 Gauge Plate	GM10020	10 X 20 X 500 Gauge Plate
GM05080	5 X 80 X 500 Gauge Plate	GM06125	6 X 125 X 500 Gauge Plate	GM10020M	10 X 20 X 1000 Gauge Plate
GM05080M	5 X 80 X 1000 Gauge Plate	GM06125M	6 X 125 X 1000 Gauge Plate	GM10025	10 X 25 X 500 Gauge Plate
GM05100	5 X 100 X 500 Gauge Plate	GM06150	6 X 150 X 500 Gauge Plate	GM10025M	10 X 25 X 1000 Gauge Plate
GM05100M	5 X 100 X 1000 Gauge Plate	GM06150M	6 X 150 X 1000 Gauge Plate	GM10030	10 X 30 X 500 Gauge Plate
GM05125	5 X 125 X 500 Gauge Plate	GM06200	6 X 200 X 500 Gauge Plate	GM10030M	10 X 30 X 1000 Gauge Plate
GM05125M	5 X 125 X 1000 Gauge Plate	GM06200M	6 X 200 X 1000 Gauge Plate	GM10040	10 X 40 X 500 Gauge Plate
GM05150	5 X 150 X 500 Gauge Plate	GM06250	6 X 250 X 500 Gauge Plate	GM10040M	10 X 40 X 1000 Gauge Plate
GM05150M	5 X 150 X 1000 Gauge Plate	GM06300	6 X 300 X 500 Gauge Plate	GM10050	10 X 50 X 500 Gauge Plate
GM05200	5 X 200 X 500 Gauge Plate	GM0800	8mmsq X 500 Gauge Plate	GM10050M	10 X 50 X 1000 Gauge Plate
GM05200M	5 X 200 X 1000 Gauge Plate	GM08010	8 X 10 X 500 Gauge Plate	GM10060	10 X 60 X 500 Gauge Plate
GM05250	5 X 250 X 500 Gauge Plate	GM08010M	8 X 10 X 1000 Gauge Plate	GM10060M	10 X 60 X 1000 Gauge Plate
GM05250	5 X 250 X 500 Gauge Plate	GM08015	8 X 15 X 500 Gauge Plate	GM10075	10 X 75 X 500 Gauge Plate
GM10075M	10 X 75 X 1000 Gauge Plate	GM15030M	15 X 30 X 1000 Gauge Plate	GM25040M	25 X 40 X 1000 Gauge Plate



Part Number	Description	Part Number	Description	Part Number	Description
GM10100	10 X 100 X 500 Gauge Plate	GM15040	15 X 40 X 500 Gauge Plate	GM25050	25 X 50 X 500 Gauge Plate
GM10100M	10 X 100 X 1000 Gauge Plate	GM15040M	15 X 40 X 1000 Gauge Plate	GM25050M	25 X 50 X 1000 Gauge Plate
GM10125	10 X 125 X 500 Gauge Plate	GM15050	15 X 50 X 500 Gauge Plate	GM25060	25 X 60 X 500 Gauge Plate
GM10125M	10 X 125 X 1000 Gauge Plate	GM15050M	15 X 50 X 1000 Gauge Plate	GM25075	25 X 75 X 500 Gauge Plate
GM10150	10 X 150 X 500 Gauge Plate	GM15060	15 X 60 X 500 Gauge Plate	GM25075M	25 X 75 X 1000 Gauge Plate
GM10150M	10 X 150 X 1000 Gauge Plate	GM15060M	15 X 60 X 1000 Gauge Plate	GM25080	25 X 80 X 500 Gauge Plate
GM10200	10 X 200 X 500 Gauge Plate	GM15075	15 X 75 X 500 Gauge Plate	GM25080M	25 X 80 X 1000 Gauge Plate
GM10200M	10 X 200 X 1000 Gauge Plate	GM15080	15 X 80 X 500 Gauge Plate	GM25100	25 X 100 X 500 Gauge Plate
GM10250	10 X 250 X 500 Gauge Plate	GM15100	15 X 100 X 500 Gauge Plate	GM25100M	25 X 100 X 1000 Gauge Plate
GM10300	10 X 300 X 500 Gauge Plate	GM15100M	15 X 100 X 1000 Gauge Plate	GM25125	25 X 125 X 500 Gauge Plate
GM1200	12mm Sq X 500 Gauge Plate	GM15125	15 X 125 X 500 Gauge Plate	GM25125M	25 X 125 X 1000 Gauge Plate
GM12015	12 X 15 X 500 Gauge Plate	GM15150	15 X 150 X 500 Gauge Plate	GM25150	25 X 150 X 500 Gauge Plate
GM12015M	12 X 15 X 1000 Gauge Plate	GM15150M	15 X 150 X 1000 Gauge Plate	GM25200	25 X 200 X 500 Gauge Plate
GM12020	12 X 20 X 500 Gauge Plate	GM15200	15 X 200 X 500 Gauge Plate	GM25250	25 X 250 X 500 Gauge Plate
GM12020M	12 X 20 X 1000 Gauge Plate	GM15250	15 X 250 X 500 Gauge Plate	GM25250M	25 X 250 X 1000 Gauge Plate
GM12025	12 X 25 X 500 Gauge Plate	GM15250M	15 X 250 X 1000 Gauge Plate	GM25300	25 X 300 X 500 Gauge Plate
GM12025M	12 X 25 X 1000 Gauge Plate	GM15300	15 X 300 X 500 Gauge Plate	GM25300M	25 X 300 X 1000 Gauge Plate
GM12030	12 X 30 X 500 Gauge Plate	GM2000	20mm sq X 500 Gauge Plate	GM3000	30mmsq X 500 Gauge Plate
GM12030M	12 X 30 X 1000 Gauge Plate	GM2000M	20mmsq X 1000 Gauge Plate	GM30040	30 X 40 X 500 Gauge Plate
GM12040	12 X 40 X 500 Gauge Plate	GM20025	20 X 25 X 500 Gauge Plate	GM30040M	30 X 40 X 1000 Gauge Plate
GM12040M	12 X 40 X 1000 Gauge Plate	GM20025M	20 X 25 X 1000 Gauge Plate	GM30050	30 X 50 X 500 Gauge Plate
GM12050	12 X 50 X 500 Gauge Plate	GM20030	20 X 30 X 500 Gauge Plate	GM30050M	30 X 50 X 1000 Gauge Plate
GM12050M	12 X 50 X 1000 Gauge Plate	GM20030M	20 X 30 X 1000 Gauge Plate	GM30060	30 X 60 X 500 Gauge Plate
GM12060	12 X 60 X 500 Gauge Plate	GM20040	20 X 40 X 500 Gauge Plate	GM30060M	30 X 60 X 1000 Gauge Plate
GM12060M	12 X 60 X 1000 Gauge Plate	GM20040M	20 X 40 X 1000 Gauge Plate	GM30075	30 X 75 X 500 Gauge Plate
GM12075	12 X 75 X 500 Gauge Plate	GM20050	20 X 50 X 500 Gauge Plate	GM30075M	30 X 75 X 1000 Gauge Plate
GM12080	12 X 80 X 500 Gauge Plate	GM20050M	20 X 50 X 1000 Gauge Plate	GM30080	30 X 80 X 500 Gauge Plate
GM12080M	12 X 80 X 1000 Gauge Plate	GM20060	20 X 60 X 500 Gauge Plate	GM30080M	30 X 80 X 1000 Gauge Plate
GM12100	12 X 100 X 500 Gauge Plate	GM20060M	20 X 60 X 1000 Gauge Plate	GM30100	30 X 100 X 500 Gauge Plate
GM12100M	12 X 100 X 1000 Gauge Plate	GM20075	20 X 75 X 500 Gauge Plate	GM30125	30 X 125 X 500 Gauge Plate
GM12125	12 X 125 X 500 Gauge Plate	GM20075M	20 X 75 X 1000 Gauge Plate	GM30125M	30 X 125 X 1000 Gauge Plate
GM12125M	12 X 125 X 1000 Gauge Plate	GM20080	20 X 80 X 500 Gauge Plate	GM30150	30 X 150 X 500 Gauge Plate
GM12150	12 X 150 X 500 Gauge Plate	GM20080M	20 X 80 X 1000 Gauge Plate	GM30150M	30 X 150 X 1000 Gauge Plate
GM12150M	12 X 150 X 1000 Gauge Plate	GM20100	20 X 100 X 500 Gauge Plate	GM30200	30 X 200 X 500 Gauge Plate
GM12200	12 X 200 X 500 Gauge Plate	GM20125	20 X 125 X 500 Gauge Plate	GM30200M	30 X 200 X 1000 Gauge Plate
GM12200M	12 X 200 X 1000 Gauge Plate	GM20150	20 X 150 X 500 Gauge Plate	GM30250	30 X 250 X 500 Gauge Plate
GM12250	12 X 250 X 500 Gauge Plate	GM20200	20 X 200 X 500 Gauge Plate	GM30250M	30 X 250 X 1000 Gauge Plate
GM12250M	12 X 250 X 1000 Gauge Plate	GM20250	20 X 250 X 500 Gauge Plate	GM30300	30 X 300 X 500 Gauge Plate
GM12300	12 X 300 X 500 Gauge Plate	GM20250M	20 X 250 X 1000 Gauge Plate	GM30300M	30 X 300 X 1000 Gauge Plate
GM1500	15mmsq X 500 Gauge Plate	GM20300	20 X 300 X 500 Gauge Plate	GM4000	40mmsq X 500 Gauge Plate
GM15020	15 X 20 X 500 Gauge Plate	GM2500	25mm Sq X 500 Gauge Plate	GM5000	50mmsq X 500 Gauge Plate
GM15020M	15 X 20 X 1000 Gauge Plate	GM25030	25 X 30 X 500 Gauge Plate		
GM15025	15 X 25 X 500 Gauge Plate	GM25030M	25 X 30 X 1000 Gauge Plate		
GM15030	15 X 30 X 500 Gauge Plate	GM25040	25 X 40 X 500 Gauge Plate		