

NEW PLYMOUTH STEEL SUPPLIES LTD

Speciality Metals

Bright Mild Steel Bar

Grade 1020 (AS1443)

All purpose low carbon steel

Cold Drawn

Good ductility

Good weldability

Suitable for general engineering applications where strength is not a major consideration

Not suitable for through-hardening, flame or induction hardening

NPSS Colour – Fluro Yellow

Carbon Steel Bar

Grade 1045 (AS1442, JIS G4051-S45C, BS 970:En8D/43B)

Fully killed medium carbon steel

Good weldability (with pre and post heating)

Suitable for flame and induction hardening

Low-medium stress mechanical and automotive components

Used for hydraulic rams, shafts and med-high strength treaded fasteners

Alloy Steel Bar

Grade 4140 (AS1444, ASTM A434, EN 10083)

General purpose, high tensile

Hardened and tempered

High yield & fatigue strength

Superior impact properties compared to plain carbon steels like 1045

Suitable for flame and induction hardening

Not recommended for welding

Used for axles, shafts, high tensile studs & bolts, gears and drill rods

NPSS Colour – Fluro Pink

Other Grades available:

1214 – Free Machining, for general repetition engineering applications where low strength & ductability are acceptable

4340 – Higher core strength than 4140, better impact properties & ductility.

For small highly stressed components such as gears

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Round Bar

Imperial	Metric mm	1020	4140	1045
3/16"	4.76	√		
1/4"	6.36	√		
5/16"	7.94	√		
	8	√		
3/8"	9.52	√	√	
	10	√	√	
	12	√	√	
1/2"	12.7	√	√	
9/16"	14.29	√		
5/8"	15.88	√	√	
	16	√		
11/16"		√		
3/4"		√	√	
	20	√	√	
7/8"	22.22	√	√	
	25	√	√	
1"	25.4	√	√	
1 1/8"	28.57	√	√	
	30	√	√	
1 1/4"	31.75	√	√	
	35	√	√	
1 1/2"	38.1	√	√	
	40	√	√	
1 3/4"	44.4	√	√	
	45	√	√	
	50	√	√	
2"	50.8	√	√	
	60	√	√	
2 1/2"	63.5	√		
	65	√		
	70	√		
	75		√	
3"	76.2	√		
	80	√	√	
	100	√	√	
4"	101.6	√		
	130			√
	150			√
	230			√

√ Available ex New Plymouth Steel Supplies

Please contact sales staff for info on other sizes & grades