

GENERAL DESCRIPTION

Hot rolled structural steel with a nominal minimum yield strength as specified in the table below, with good ductility. Impact grade available if required.

APPLICATIONS

- Welded steel beams
- Structural applications

STANDARDS

- AS/NZS 3678:2016
- AS/NZS 1365:1996

CHEMICAL COMPOSITION	TYPICAL (wt %)	EXPECTED MAXIMUM (wt %) ^[1]
Carbon (C)	0.14	0.22
Silicon (Si)	0.14	0.30
Manganese (Mn)	1.45	1.70
Sulphur (S)	0.016	0.030
Phosphorus (P)	0.016	0.040
Vanadium (V)	0.075	0.10

^[1] Values shown refer to relevant Australian/ New Zealand standard unless stated otherwise

MECHANICAL PROPERTIES	10 – 12mm	12 – 20mm	20 – 50mm	10 – 12mm	12 – 20mm	20 – 25mm	25 – 50mm
	TYPICAL			EXPECTED MINIMUM			
Yield strength, MPa	420	400	380	360	350	340	340
Tensile strength, MPa	550	540	530	450	450	450	450
Elongation % on L ₀ =5.65mm√S ₀	25	24	23	20	20	20	18*

*For test piece cross-sectional area >1000mm², minimum elongation is reduced by 2% from AS/NZS3678 value.

Material should be used promptly (within 6 months) to avoid the possibility of storage related corrosion and degradation. Mechanical properties are guaranteed at ambient/room temperatures. Please consult technical representatives at New Zealand Steel for high/low temperature use.

FABRICATING PERFORMANCE 1 = Limited 5 = Excellent	
METHOD	RATING
Bending	3
Welding	4

DIMENSION CAPABILITIES	
THICKNESS (mm)	WIDTH (mm)
10.0 – 50.0	730 - 1540

Other dimensional combinations may be available by enquiry and there is minimum order quantity for any dimension outside of standard plate sizes.

STANDARD PLATE SIZE	
WIDTH (mm)	LENGTH (mm)
1220 – 1250	2400
	3600
	6000
1510 - 1550	12000

IMPACT PROPERTIES (AS/NZS 3678 L0 L15)	
GUARANTEED MINIMUM (average 3 tests)	AT TEMPERATURE
27 Joules	0°C , - 15°C

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