

HR



Data Sheet

300S0

Hot-Rolled – Plate

Revision: 09/12/2021

GENERAL DESCRIPTION

Hot rolled steel plate with nominal minimum yield strength, impact testing and additional requirements according to AS/NZS 3678:2016 appendix F. Intended for application in steel structures and fracture critical applications as specified in NZS404.1, with good resistance to brittle fracture.

10mm and 12mm x 12xx plate is produced on either the Heavy Plate Line or light (coil) plate line, a preference can be specified when ordering.

>12mm plate is produced on the Heavy Plate Line.

APPLICATIONS

- Structural members, NZS3404.1:2009
- Fracture critical members

STANDARDS

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

CHEMICAL COMPOSITION	TYPICAL (wt %)	STANDARD MAX (wt %) ^[1]
Carbon (C)	0.19	0.22
Silicon (Si)	0.14	0.50
Manganese (Mn)	1.03	1.70
Sulphur (S)	0.009	0.030
Phosphorus (P)	0.013	0.040
Vanadium (V)	0.040	0.050

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

MECHANICAL PROPERTIES	TYPICAL (mm)			STANDARD MIN ^[2] (mm)		
	>10 ≤12	>12 ≤20	>20	>10 ≤12	>12 ≤20	>20 ≤50
Yield strength, MPa	350	340	320	310	300	280
Tensile strength, MPa	510	500	480	430	430	430
Elongation% on L ₀ =5.65mm√So	32	28	27	25	25	25

^[2] Values shown refer to relevant Australian/ New Zealand standard unless stated otherwise

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.

Limiting requirements for S0 grade seismic steels			
Item	Requirement	Limit	Typical
1	Minimum percentage elongation after fracture (5.56 √So)	25%	28%
2	Maximum yield to tensile ratio (ReI/Rm)	0.80	0.72
3	Maximum yield stress <1.33*Fy	400MPa	350MPa
4	Impact testing 0°C	>70J average >50J Individual	110J

Extract from AS/NZS 3678:2016 table F1

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

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

DIMENSION CAPABILITIES	
THICKNESS (mm)	WIDTH (mm)
10.00 – 50.00	730 – 1540

Other dimensional combinations may be available by enquiry.

IMPACT PROPERTIES (AS/NZS 3678 S0)*	
GUARANTEED MINIMUM	AT TEMPERATURE
Individual test 50J	- 0°C
Avg. three tests 70 J	- 0°C

*Only applies for plates with nominal thickness >12mm

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