



Data Sheet

AS3678 300S0

Hot-Rolled – Plate

Revision: 20/07/2016

GENERAL DESCRIPTION

Hot rolled steel plate with nominal minimum yield strength, impact testing and additional requirements according to AS3678 appendix D. Intended for application in steel structures and fracture critical applications as specified in NZ3404.1, with good resistance to brittle fracture.

APPLICATIONS

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

STANDARDS

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

	10 – 32mm	32 – 50mm	10 – 32mm	32 – 50mm
CHEMICAL COMPOSITION	TYPICAL (wt %)		EXPECTED MAXIMUM (wt %)^[1]	
Carbon (C)	0.16	0.15	0.22	0.22
Silicon (Si)	0.24	0.250	0.35	0.35
Manganese (Mn)	1.30	1.30	1.70	1.70
Sulphur (S)	0.017	0.016	0.030	0.030
Phosphorus (P)	0.020	0.012	0.040	0.040
Vanadium (V)	0.016	0.035	0.030	0.045

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

	10.0 – 12.0mm	12.0 – 20.0mm	20.0 – 50.0mm	10.0 – 12.0mm	12.0 – 20.0mm	20.0 – 50.0mm
MECHANICAL PROPERTIES	TYPICAL			EXPECTED MINIMUM		
Yield strength, MPa	350	340	320	310	300	280
Tensile strength, MPa	510	500	480	430	430	430
Elongation % on $L_0=5.65\sqrt{S_0}$	32	29	28	25	25	25

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 Ratio requirements for S0 grade seismic steels			
Item	Requirement	Ratio	Typical
1	Minimum percentage elongation after fracture (5.56 $\sqrt{S_0}$)	25%	29%
2	Maximum yield to tensile ratio (ReL/Rm)	0.8	0.72
3	Maximum yield stress <1.33*Fy	400MPa	350MPa
4	Impact testing 0°C	>70J	110J

Extract from AS3678:2011 table D1

New Zealand Steel Limited

Auckland
Tel. +64 9 375 8999
Fax. +64 9 375 8213
A BlueScope Steel Company

www.nzsteel.co.nz
nzsteel@bluescopesteel.com
Copyright © 2016 New Zealand Steel Limited

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

New Zealand Steel Limited

Auckland

Tel. +64 9 375 8999

Fax. +64 9 375 8213

A BlueScope Steel Company

www.nzsteel.co.nz

nzsteel@bluescopesteel.com

Copyright © 2016 New Zealand Steel Limited