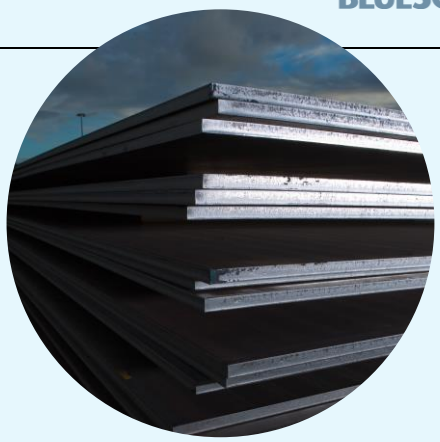
Uncoated steel
Data Sheet

October 2019. This literature supersedes all previous issues



XLERPLATE® steel
AS/NZS 3678 – 350L15

General description
A structural steel plate product suitable for low temperature application with nominal yield strength of 350MPa and guaranteed impact properties at -15ºC.

Typical uses
- General fabrication
- Structural members
- Bridges
- Storage tanks

Features & benefits
- Guaranteed minimum strength levels
- Low temperature properties
- Excellent weldability
- Excellent formability
- ACRS accreditation (ACRS Certificate No. 120802)
- ATIC10 accreditation

Warnings
- This material should be used in conjunction with the appropriate structural design and welding standards
- Maximum recommended temperature for hot forming is 620ºC. If heated above 620ºC, mechanical properties may deteriorate.
- An untrimmed (mill) edge may contain surface discontinuities associated with the rolling process (refer to clause 8 of AS/NZS 3678). The plate supplied may include an amount outside of the nominal ordered width, in accordance with relevant Australian standards. The area of the supplied plate which is outside of the nominal (customer ordered) width must not be used. Customers are advised to remove an equal width from each side of the plate when trimming.

Australian standards
AS/NZS 3678: 2016
AS/NZS 1365: 1996
ISO 9001:2015 Quality System certified

Normal / optional supply conditions

	Normal	Optional
Thickness Range	5mm – 80mm	>80 to 100mm by enquiry only
Availability	Refer to XLERPLATE® steel size schedule 2.	-
Edge Condition	Untrimmed (Mill Edge)*	Trimmed
Tolerances	AS/NZS 1365: 1996	-
Ultrasonic Inspection	-	AS 1710: 2007
Surface Inspection	BlueScope	Third party
Certification	BlueScope	Third party endorsed

Optional supply conditions may be subject to dimensional restrictions
*Plates less than 8mm in thickness are supplied with trimmed edges

Chemical composition

Element	Guaranteed Maximum %
Carbon	0.22
Silicon	0.5
Manganese	1.70
Phosphorus	0.040
Sulfur	0.030
Chromium	0.25
Nickel	0.30
Copper	0.40
Molybdenum	0.08
Aluminium	0.10
Niobium**	0.060
Titanium	0.040
CEQ (IIW)	0.48

All values shown refer to the relevant Australian Standard unless otherwise stated

$$CEQ(IIW) = C + \frac{Mn}{6} + \frac{(Cr + Mo + V)}{5} + \frac{(Cu + Ni)}{15}$$

** Niobium + Vanadium + Titanium ≤ 0.15%

Mechanical properties

Tensile Properties (Transverse)		Thickness (mm)						
		5 ≤ t ≤ 8	8 < t ≤ 12	12 < t ≤ 20	20 < t ≤ 32	32 < t ≤ 50	50 < t ≤ 80	80 < t ≤ 100
Yield Strength (MPa)	Guaranteed Min	360	360	350	340	340	340	330
Tensile Strength (MPa)	Guaranteed Min	450	450	450	450	450	450	450
Elongation $5.65\sqrt{S_0}$ (%)	Guaranteed Min	20	20	20	20	20	20	20

Charpy Impact Properties	Longitudinal on 10 X 10 mm test piece	Test Temperature (ºC)	Absorbed Energy (joules)	
			Avg. of 3	Individual
Guaranteed Min	350L15	-15	27	20

Formability	Thickness (mm)	Longitudinal	Transverse
Recommended min inside Radius	t ≤ 6	2.25t	1.5t
	6 < t ≤ 20	3.0t	2.0t
	20 < t ≤ 25	3.75t	2.5t
	t > 25	Hot Forming	

This product is not suitable for hot forming above 620 ºC.

Fire hazard properties

Test & Evaluation Method	Result
Combustibility test for materials (AS 1530.1-1994)	Not deemed combustible