Uncoated Steel
Data Sheet

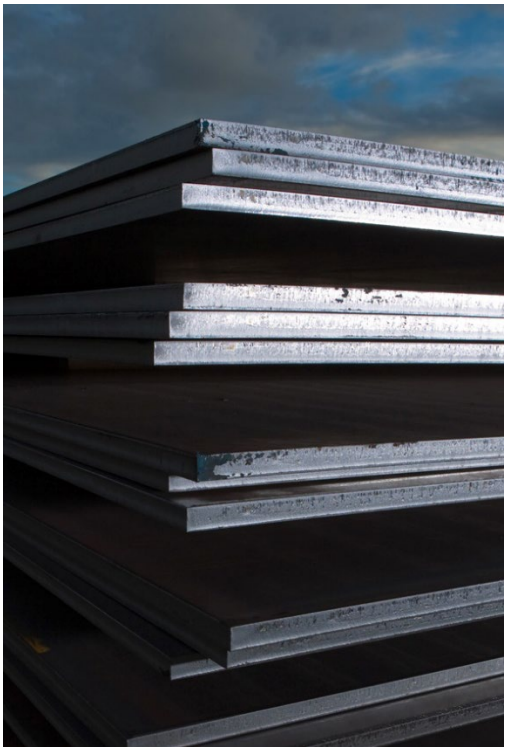
October 2019 - This literature supersedes all previous issues

XLERPLATE® steel

AS/NZS 3678 – 250L15

General description

A structural steel plate product suitable for low temperature application with nominal yield strength of 250MPa 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)

ATIC Scheme 10 accreditation

Warnings

This material should be used in conjunction with the appropriate structural design and welding standards.

An untrimmed (mill) edge may contain surface discontinuities associated with the rolling process (refer to clause 8 of AS/NZS 3678:2016). 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 and International Standards

AS/NZS 3678:2016
AS/NZS 1365:1996 (R2016)
ISO 9001:2015 Quality System Certified

Normal / optional supply conditions

	Normal	Optional
Thickness Range	5mm – 150mm	-
Availability	5 to 40mm refer to XLERPLATE® steel size schedule 1	>40mm available by enquiry only
Edge Condition	Untrimmed (Mill Edge)*	Trimmed
Tolerances	AS/NZS 1365:1996 (R2016)	-
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**	0.020
Titanium	0.040
CEQ (IIW)	0.44

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

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

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 ≤ 150
Yield Strength (MPa)	Guaranteed Min	280	260	250	250	250	240	230
Tensile Strength (MPa)	Guaranteed Min	410	410	410	410	410	410	410
Elongation $5.65\sqrt{S_0}$ (%)	Guaranteed Min	22	22	22	22	22	22	22

Charpy Impact Properties	Longitudinal on 10 x 10mm test piece	Test Temperature (ºC)	Absorbed Energy (joules)	
			Avg. of 3	Individual
Guaranteed Min	250L15	-15	27	20

Formability	Thickness (mm)	Longitudinal	Transverse
Recommended min inside Radius	t ≤ 6	1.5t	1.0t
	6 < t ≤ 10	2.25t	1.5t
	10 < t ≤ 20	3.0t	2.0t
	20 < t ≤ 50	6.0t	4.0t
	t > 50	Hot Forming	

This product is not suitable for hot forming above 620ºC

Fire hazard properties

Test & Evaluation Method	Result
Combustibility test for materials (AS 1530.1-1994 (R2016))	Not deemed combustible (steel substrate) #

These test results relate only to the behaviour of the test specimens of the material under the particular conditions of the test and they are not intended to be the sole criterion for assessing the potential fire hazard of the material in use.