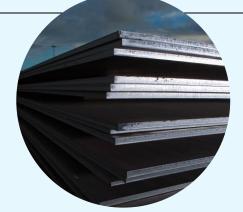
## **Uncoated steel**

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  $-15^{\circ}$ C.

#### 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
- 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 – 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	-	
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)						
		$5 \le t \le 8$	8 < t ≤ 12	12 < t ≤ 20	$20 < t \le 32$	$32 < t \le 50$	$50 < t \le 80$	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√S₀ (%)	Guaranteed Min	22	22	22	22	22	22	22

Charpy Impact Properties	Longitudinal on	Test Temperature (°C)	Absorbed Energy (joules)		
	10 X 10 mm test piece		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 620 °C.

#### Fire hazard properties

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

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Please ensure you have the correct data sheet for this product as displayed at www.steel.com.au For more information contact Steel

1800 024 402 <u>steeldirect@bluescopesteel.com</u> For more information contact Steel Direct





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