

# **XLERPLATE<sup>®</sup> 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 -15°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)  
ATIC Scheme 10 accreditation

### **Warnings**

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

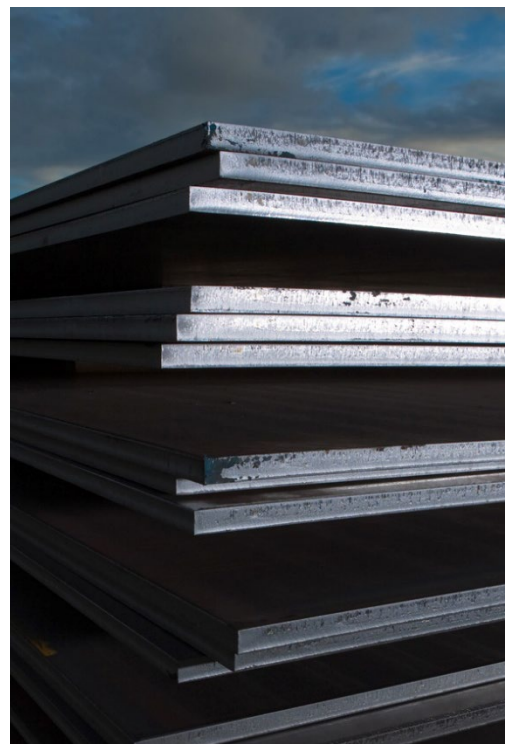
Maximum recommended temperature for hot forming is 620°C. If heated above 620°C, mechanical properties may deteriorate.

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

Material should be stored under cover to avoid issues with storage-related corrosion.

### **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
<b>Thickness Range</b>	5mm – 80mm	>80 to 100mm by enquiry only
<b>Availability</b>	Refer to XLERPLATE® steel size schedule 2	-
<b>Edge Condition</b>	Untrimmed (Mill Edge)*	Trimmed
<b>Tolerances</b>	AS/NZS 1365:1996 (R2016)	-
<b>Ultrasonic Inspection</b>	-	AS 1710:2007 (R2017)
<b>Surface Inspection</b>	BlueScope	Third party
<b>Certification</b>	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 %
<b>Carbon</b>	0.22
<b>Silicon</b>	0.5
<b>Manganese</b>	1.70
<b>Phosphorus</b>	0.040
<b>Sulfur</b>	0.030
<b>Chromium</b>	0.25
<b>Nickel</b>	0.30
<b>Copper</b>	0.40
<b>Molybdenum</b>	0.08
<b>Aluminium</b>	0.10
<b>Niobium**</b>	0.060
<b>Titanium</b>	0.040
<b>CEQ (IIW)</b>	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√S <sub>0</sub> (%)	Guaranteed Min	20	20	20	20	20	20	20

Charpy Impact Properties	Longitudinal on 10 x 10mm test piece	Test Temperature (°C)	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 ≤ 10	3.0t	2.0t
	10 < t ≤ 20	3.75t	2.5t
	t > 20	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 (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.

**[steel.com.au](http://steel.com.au)**

To ensure you have the most current information

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