

AS/NZS 3678 - 250L15

XLERPLATE® steel

DATE: AUGUST 2009

PRODUCT DESCRIPTION

- A structural steel plate product suitable for low temperature applications with nominal yield strength of 250 MPa and guaranteed impact properties at -15°C

SUPPLY CONDITIONS

- Thickness Range: 8mm – 100mm
- Availability: 8mm – 40mm refer to XLERPLATE® steel Size Schedule 1. Thicknesses greater than 40mm are available by enquiry
- Edge Condition: Untrimmed (Mill Edge) / Trimmed
- Tolerances: AS/NZS 1365
- Ultrasonic Inspection: AS1710 available
- Surface Inspection: BlueScope Steel (third party available)
- Certification: BlueScope Steel - Analysis and Mechanical tests

FEATURES & BENEFITS

- Guaranteed minimum strength levels
- Low temperature properties
- Excellent weldability
- Excellent formability

WARNINGS

- This material should be used in conjunction with the appropriate structural design and welding standards.
- An untrimmed (Mill) edge may contain minor surface discontinuities as a result of the rolling process. (Refer Clause 7 AS/NZS 3678). It is recommended that a minimum of 50mm be removed from each untrimmed edge.

NEAREST OVERSEAS SPECIFICATIONS

ASTM A36 ISO 630-E275D JISG 3106-SM400C EN 10025-2-S235J2

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CHEMICAL COMPOSITION				
Element	Guaranteed Maximum % ⁽²⁾	Typical % / Thickness (mm)		
		8 < t < 20	20 ≤ t ≤ 40	40 < t ≤ 100
Carbon	0.22	0.155	0.14	0.09
Silicon	0.55	0.15	0.20	0.40
Manganese	1.70	0.65	1.10	1.40
Phosphorus	0.040	0.020	0.020	0.020
Sulfur	0.030	0.010	0.010	0.003
Aluminium	0.100	0.030	0.025	0.030
Titanium	0.40	–	0.018	0.018
CEQ (IIW) ⁽¹⁾	0.44	0.27	0.33	0.33

$$(1) \text{CEQ (IIW)} = \frac{C}{6} + \frac{Mn}{5} + \frac{(Cr+Mo+V)}{5} + \frac{(Cu+Ni)}{15}$$

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

MECHANICAL PROPERTIES						
Tensile Properties (Transverse)		Thickness Range (mm)				
		8	8 < t ≤ 12	12 < t < 50	50 < t ≤ 80	80 < t ≤ 100
Guaranteed Min.	Yield Strength (MPa)	280	260	250	240	240
	Tensile Strength (MPa)	410	410	410	410	410
	Elong. on 5.65√So (%)	22	22	22	22	22
Typical	Yield Strength (MPa)	310 - 430	300 - 430	280 - 400	270 - 330	270 - 330
	Tensile Strength (MPa)	430 - 530	430 - 530	420 - 520	430 - 490	430 - 490
	Elong. on 5.65√So (%)	26 - 38	26 - 38	26 - 36	29 - 35	29 - 35
Charpy Impact Properties Longitudinal at -15°C on 10 x 10mm specimen		Absorbed Energy (joules)				
		Avg. of 3			Ind.	
Guaranteed Min.		27			20	
Typical t ≤ 40mm		35 - 130			30 - 180	
t > 40mm		100 - 250			60 - 280	

For weldability and formability/hardness data refer to AS/NZS 3678-250 Data Sheet.