AS/NZS 3678 - 250 XLERPLATE® steel Floorplate



Revision 3 June 2016

This literature supersedes all previous issues

Plate – PL Structural - S

GENERAL DESCRIPTION

A hot rolled structural floorplate (raised pattern one surface), produced with nominal yield strength of 250MPa

AUSTRALIAN STANDARDS

AS/NZS 3678: 2016 AS/NZS 1365: 1996

FEATURES & BENEFITS

- Guaranteed minimum strength levels
- Excellent weldability
- Excellent formability
- ACRS accreditation (ACRS Certificate No. 120802)

WARNINGS

- This material should be used in conjunction with the appropriate design and welding standards
- An untrimmed (Mill) edge may contain surface discontinuities associated with the rolling process (refer to Clause 9 of AS/NZS 3678:2011). 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.
- No warranty is provided in relation to the use of this material for anti-slip applications.
- . This material is not suitable in 'wet' surface conditions and is not suitable in 'dry' surface conditions where ramps have a steeper incline than 1:14.
- Customers to make their own assessment of the suitability of this product in the end use application.

NORMAL / OPTIONAL SUPPLY CONDITIONS

	Normal	Optional
Thickness Range	6mm – 12mm	
Availability	Plate available in standard sizes	
Edge Condition	Untrimmed (Mill Edge)*	
Tolerances	AS/NZS 1365: 1996	
Ultrasonic Inspection		AS 1710: 2007 available
Surface Inspection	BlueScope Steel	Third party
Certification	BlueScope Steel	Third party endorsed

Optional supply conditions may be subject to dimensional restrictions



^{*} Plates less than 8mm in thickness are supplied with trimmed edges

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CHEMICAL COMPOSITION

Element	Guaranteed Maximum %	Typical % Thickness (mm)	
Element	Guaranteeu Maximum 76	8 ≤ t ≤ 12	
Carbon	0.22	0.14	
Silicon	0.55	0.20	
Manganese	1.70	1.10	
Phosphorus	0.040	0.020	
Sulfur	0.030	0.010	
Chrome	0.25	0.023	
Nickel	0.50	0.021	
Copper	0.40	0.017	
Molybdenum	0.10	0.002	
Aluminium	0.100	0.035	
Titanium	0.040	0.018	
CEQ (IIW)	0.44	0132	

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)	
		t = 8	8 < t ≤ 12
Yield Strength (MPa)	Guaranteed Min	280	260
	Typlcal	345 - 400	330 – 390
Tensile Strength (MPa)	Guaranteed Min	410	410
	Typical	460 - 510	460 - 500
Elong. On 5.65√So (%)	Guaranteed Min	-	-
	Typical	30 - 40	29 - 39

SLIP RESISTANCE TESTING

Limited testing has been undertaken on this material to assess compliance with AS 4586 Wet Pendulum Test (Appendix A) and Oil Wet Inclining Platform Test (Appendix D). These tests were undertaken on newly produced Floorplate with no surface treatment. The results for the testing were as follows:

AS4586:2013 Appendix A Wet Pendulum Test - P3
AS4586:2013 Appendix D Oil-Wet Inclining Platform Test - R10



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WELDABILITY

	Guaranteed Maximum	Typical	
Group 4	4	2	
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Refer to WTIA Technical Note 1 or AS/NZS 1554.1

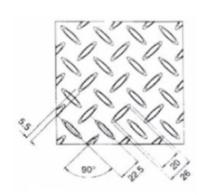
FORMABILITY

Thickness (mm)	Long	Trans
8 ≤ t ≤ 20	3.0t	2.0t
Raised pattern inside Recommended min. inside radii		

FOR MASS PER SQUARE METRE

Thickness (mm)	(kg/m²)
8	64.80
10	80.50
12	96.20

XLERPLATE® steel Floorplate pattern



Dimensions in Lozenge height approximately 1.5mm (Dimensions are indicative only)