AS/NZS 3678 - A1006 XLERPLATE® steel

Revision 2 January 2015

This literature supersedes all previous issues

Plate – PL **Analysis - A**

GENERAL DESCRIPTION
Low carbon and low strength structural grade

TYPICAL USES
- Galvanising Kettles

FEATURES & BENEFITS
- Excellent galvanising characteristics
- Excellent weldability
- Excellent formability

AUSTRALIAN STANDARDS
AS/NZS 3678: 2011
AS/NZS 1365: 1996

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
- Correct selection of electrodes for end use application, particularly in regard to galvanising tank applications, it is important to refer to electrode manufacturer

NORMAL / OPTIONAL SUPPLY CONDITIONS

	Normal	Optional
Thickness Range	8mm – 180mm	Thickness outside this range may be available by enquiry
Availability	By enquiry only	
Edge Condition	Untrimmed (Mill Edge)	
Tolerances	AS/NZS 1365: 1996	
Ultrasonic Inspection		AS 1710: 2007
Surface Inspection	BlueScope Steel	Third party
Certification	BlueScope Steel	Third party endorsed

Optional supply conditions may be subject to dimensional restrictions.

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CHEMICAL COMPOSITION

Element	Guaranteed Maximum %	Typical % Thickness (mm)
		8 ≤ t ≤ 180
Carbon	0.08	0.048
Silicon	0.03	0.005
Manganese	0.40	0.23
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	0.030
Titanium	0.040	0.003
CEQ (IIW)	-	0.09

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

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

* Chrome + Nickel + Copper + Molybdenum ≤ 1.00%

MECHANICAL PROPERTIES

Tensile Properties (Transverse)		Thickness (mm)	
		t < 16	t ≥ 16
Yield Strength (MPa)	Guaranteed Min	-	
	Typical	220 - 320	180 – 260
Tensile Strength (MPa)	Guaranteed Min	-	
	Typical	320 - 420	280 – 380
Elong. On $5.65\sqrt{S_0}$ (%)	Guaranteed Min	-	
	Typical	26 - 38	24 - 36

FORMABILITY

Thickness (mm)	Long	Trans
t ≤ 20	2.25t	1.5t
20 < t ≤ 50	3.0t	2.0t
50 < t ≤ 100	4.5t	3.0t
t > 100	Hot form	

Recommended min. inside radii

HARDNESS

Typical
80 –120 BHN

WELDABILITY

Group
1

Refer to WTIA Technical Note 1 or AS/NZS 1554.1