

AS 1548 - PT430T (L0) XLERPLATE® steel

Revision 1

May 2014



This literature supersedes all previous issues

Plate – PL

Pressure Vessel - PV

GENERAL DESCRIPTION

A fully killed, fine grained, carbon-manganese steel for boiler and pressure vessel applications, with a guaranteed minimum tensile strength of 430MPa. Produced by Thermo-Mechanical controlled rolling

AUSTRALIAN STANDARDS

AS 1548: 2008
AS/NZS 1365: 1996

FEATURES & BENEFITS

- Guaranteed minimum strength levels
- Excellent weldability
- Excellent formability

WARNINGS

- This material should be used in conjunction with the appropriate structural design and welding standards
- Guidelines for cold bending, where fracture toughness is important are given in AS 4100 and AS1210
- This grade has not been designed for re-certification to PT460T
- This grade is not recognised in the ASME material code and does not carry the 'SA' prefix
- This grade is not suitable for hot forming above 620°C

NORMAL / OPTIONAL SUPPLY CONDITIONS

	Normal	Optional
Thickness Range	5mm only	
Availability	One standard size (2400mm x 5mm x 9m) only	
Edge Condition	Trimmed	
Tolerances	Thickness: AS 1548:2008 Others: 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

Australia 1800 800 789

XLERPLATE® steel, XLERPLATE LITE® steel and BlueScope are trade marks of BlueScope Steel Limited ABN 16 000 011 058.

Please ensure you have the current data sheet for this product as displayed at www.steel.com.au



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CHEMICAL COMPOSITION

Element	Guaranteed Maximum %	Typical % Thickness (mm)
		5mm
Carbon	0.20	0.155
Silicon	0.50	0.15
Manganese	1.60	0.65
Phosphorus	0.040	0.018
Sulfur	0.030	0.01
Copper	0.40	0.017
Nickel	0.50	0.021
Chromium	0.25	0.023
Molybdenum	0.10	0.002
Aluminium	0.100	0.035
Titanium	0.040	0.007
CEQ (IIW)	0.43	0.27

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 = 5
Yield Strength (MPa)	Guaranteed Min	300
	Typical	390 – 460
Tensile Strength (MPa)	Required	430 – 550
	Typical	460 – 500
Elong. On 5.65√S ₀ (%)	Guaranteed Min	22
	Typical	25 – 40

Charpy Impact Properties	Longitudinal at 0°C on 10 x 5mm specimen	Absorbed Energy (joules)	
		Av. Of 3	Ind.
Guaranteed Min	PT430T	22	16
Typical		50 - 70	25 - 90
Guaranteed Min	PT430TL0	34	27
Typical		40 - 80	30 - 90

FORMABILITY

Thickness (mm)	Long	Trans
5	1.5t	1.0t

Recommended min. inside radii

HARDNESS

Typical
165 – 190 BHN

WELDABILITY

Group
4

Refer to WTIA Technical Note 1 or AS/NZS 1554.1

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