

SA/AS1548 - 7 - 430R

XLERPLATE®

DATE: January 2006

PRODUCT DESCRIPTION

- A fully killed, fine grained, carbon-manganese steel for boiler and pressure vessel applications
- Guaranteed minimum tensile strength of 430 MPa
- Produced by hot rolling
- Australian Standard AS1548-1995 pressure grades have been approved by ASME. To demonstrate compliance with ASME rules, grades require the addition of the "SA" prefix to the AS1548 grade name, consequently plate test certification and stencil are prefixed with "SA".

SUPPLY CONDITIONS

- Thickness Range: 5mm only
- Size and Availability: Plate is available in one Standard size of (2400mm x 5mm x 9 m) only
- Edge Condition: Trimmed
- Tolerances: Thickness - SA/AS1548, others - AS1365
- Ultrasonic Inspection: AS1710 available
- Surface Inspection: BlueScope Steel (third party available)
- Certification: BlueScope Steel (third party endorsed available)

FEATURES & BENEFITS

- Guaranteed minimum strength levels
- Excellent weldability
- Excellent formability

WARNINGS

- This material should be used in conjunction with the appropriate pressure vessel design and welding standards.
- Guidelines for cold bending, where fracture toughness is important are given in AS4100 and AS1210.
- This grade has not been designed for re-certification to 7-460R.

NEAREST OVERSEAS SPECIFICATIONS

ASTM A662 Grade A EN 10028-2-P235GH

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CHEMICAL COMPOSITION		
Element	Guaranteed Maximum % ⁽²⁾	Typical %
Carbon	0.22	0.155
Silicon	0.50	0.18
Manganese	0.50-1.60	0.65
Phosphorus	0.040	0.020
Sulfur	0.030	0.013
Aluminium	0.100	0.030
CEQ (IIW) ⁽¹⁾	0.44 ⁽³⁾	0.27

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

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

(3) Values shown refer to the BlueScope Steel internal standard, where the AS/NZS 1548 guaranteed maximum % is 0.45

MECHANICAL PROPERTIES			
Tensile Properties (Transverse)		t = 5mm	
Guaranteed Min.	Yield Strength (MPa)	300	
	Tensile Strength (MPa)	430 - 550	
	Elong. on 5.65 √ So (%)	22	
Typical	Yield Strength (MPa)	380 - 440	
	Tensile Strength (MPa)	440 - 500	
	Elong. on 5.65 √ So (%)	25 - 40	
Typical Charpy Impact Properties	Longitudinal on 10 x 5mm specimen at 0°C	Absorbed Energy (joules)	
		Ave. of 3	Ind.
		30 - 80	25 - 90

FORMABILITY <small>(Recommended min. inside radii)</small>		HARDNESS	WELDABILITY
5mm	Long 1.5T, Trans 1.0T	Typical 125 - 160 BHN	Group 4 ⁽⁴⁾

(4) Refer to WTIA Technical Note 1 or AS/NZS 1554.1



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