

AS/NZS 1594 - HW350

XLERPLATE LITE™ steel

DATE: AUGUST 2009

PRODUCT DESCRIPTION

- Hot-rolled structural product with minimum yield strength of 350 MPa, good ductility and good weldability

SUPPLY CONDITIONS

- Thickness Range: 3mm – 8mm (not all thickness and width combinations are available)
- Availability: By enquiry only
- Surface finish: Hot-rolled
- Edge Condition: Untrimmed (Mill Edge) / Trimmed ⁽¹⁾
- Tolerances: AS1365
- Flatness: Class A
- Certification: BlueScope Steel - Analysis and Mechanical tests

(1) Optional supply condition. May be subject to size range restrictions.

TYPICAL USES

- Railway rolling stock and storage hoppers / bins
- Shipping containers
- Architectural features

FEATURES & BENEFITS

- Enhanced weather resistance
- Guaranteed minimum strength levels
- Good weldability and 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. It is recommended that customers satisfy themselves that the edge is suitable for the application.
- The weather resistance of this material is due to the formation of an impervious oxide layer through the use of alloy additions. Damage to this layer, or environmental conditions affecting the development of this layer, will impact on the effectiveness of the corrosion resistance.
- Colour retention across welds can be achieved by appropriate electrode selection. Welds may be susceptible to hot cracking.
- Weathering steels are not recommended without further protection for buried or submerged situations or for applications exposed to concentrated industrial fumes or severe marine conditions.
- Oxide staining of surrounding areas may occur due to run-off from this material.

NEAREST OVERSEAS SPECIFICATIONS

ASTM A242 Type1 EN 10025-5-S355JOWP JISG 3125-SPA-H CORTEN A

For more information contact:

BlueScope Steel Direct

Phone: 1800 800 789

Email: steeldirect@bluescopesteel.com

Website: www.xlerplate.com.au

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CHEMICAL COMPOSITION		
Element	Guaranteed % ⁽³⁾	Typical %
Carbon	0.15 max	0.09
Silicon	0.15 - 0.75	0.45
Manganese	1.60 max.	0.80
Phosphorus	0.055 - 0.160	0.090
Sulfur	0.030 max.	0.010
Aluminium	0.10 max.	0.030
Nickel	0.55 max.	0.20
Chromium	0.35 - 1.05	0.70
Copper	0.15 - 0.50	0.25
CEQ (IIW) ⁽²⁾	0.49 max ⁽⁴⁾	0.39

$$(2) \text{ CEQ (IIW)} = C + \frac{\text{Mn}}{6} + \frac{(\text{Cr} + \text{Mo} + \text{V})}{5} + \frac{(\text{Cu} + \text{Ni})}{15}$$

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

(4) Values shown refer to the BlueScope Steel internal standard, where the AS/NZS 1594 guaranteed maximum % is 0.54.

MECHANICAL PROPERTIES		
Tensile Properties (Longitudinal)	Guaranteed Minimum	Typical
Yield Strength (MPa)	340	380 - 450
Tensile Strength (MPa)	450	530 - 580
Elong. on 200mm (%)	15	20 - 28
180° Bend (Transverse)	3t	1t

DIMENSIONS	
Preferred Widths x Thicknesses (mm)	
	1200 x 3
	1200 x 4
	1200 x 5
	1200 x 6
	1200 x 8

Other sizes may be available on enquiry.

FABRICATING PERFORMANCE	
Bending	Good
Welding	WTIA Group 5 ⁽⁵⁾

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

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