



REDCOR® weathering steel AS/NZS 3678 - WR350 (B) (L0, L20)

General description

WR350(B) is a low phosphorous structural weathering steel with nominal yield strength of 340MPa for thicknesses from 10 to 80mm with guaranteed impact performance at 0 and -20 °C.

Typical uses

- Railway rolling stock and storage hoppers / bins
- Architectural features
- Bridges

Features & benefits

- Reduced atmospheric corrosion
- Guaranteed minimum strength levels
- Good formability
- Good toughness
- ACRS accreditation (ACRS Certificate No. 120802)

Warnings

- This material should be used in conjunction with the appropriate structural design and welding standards

- The weathering properties 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
- Refer to BlueScope Technical Bulletin No. 26 for more information regarding the use of this material

Australian standards

AS/NZS 3678: 2016

AS/NZS 1365: 1996

ISO9001 Quality System certified

Normal / optional supply conditions

	Normal	Optional
Thickness Range	10mm – 80mm	
Availability	By enquiry only	
Edge Condition	Trimmed	
Tolerances	AS/NZS 1365: 1996	
Ultrasonic Inspection		AS 1710: 2007
Surface Inspection	BlueScope	Third party
Certification	BlueScope	Third party endorsed

Chemical composition

Element	Guaranteed Maximum %
Carbon	0.14
Silicon	0.5
Manganese	1.70
Phosphorus	0.04
Sulfur	0.030
Chromium	1.05
Nickel	0.55
Copper	0.50
Molybdenum	0.10
Aluminium	0.100*
Niobium**	0.025
Titanium	0.040
CEQ (IIW)	0.52

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

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

* Values shown refer to the BlueScope internal standard

** Niobium + Titanium + Vanadium ≤ 0.15%

Mechanical properties

Tensile Properties (Transverse)		Thickness (mm)				
		9.95 < t ≤ 12	12 < t ≤ 20	20 < t ≤ 32	32 < t ≤ 50	50 < t ≤ 80
Yield Strength (MPa)	Guaranteed Min	340	340	340	340	340
Tensile Strength (MPa)	Guaranteed Min	450	450	450	450	450
Elong. On 5.65√S ₀ (%)	Guaranteed Min	20	20	20	20	20

Charpy Impact Properties	Longitudinal on 10 x 10mm test piece	Test Temperature (□C)	Absorbed Energy (joules)	
			Av. of 3	Ind.
Guaranteed Min	WR350L0 (B)	0	27	20
Guaranteed Min	WR350L20 (B)	-20	27	20

RedCor®

steel.com.au

To learn more about this product

1800 800 789

For more information call Steel Direct



The information contained in this datasheet is provided by way of general information about this product only, and has not been prepared with your specific needs in mind. We recommend that you seek BlueScope's advice as to the suitability of this product for the purpose(s) for which you propose to use it. To contact BlueScope for advice about your proposed use of this product, please contact Steel Direct. REDCOR®, BlueScope and the BlueScope brand mark are registered trade marks of BlueScope Steel Limited.

© 2017 BlueScope Steel Limited ABN 16 000 011 058.