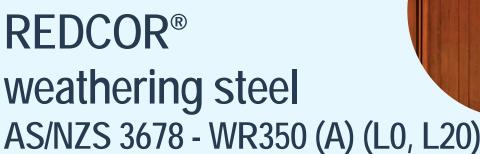
Uncoated steel

Datasheet

December 2017. This literature supersedes all previous issues





General description

WR350(A) is a high phosphorous structural weathering steel with nominal yield strength of 340MPa for thicknesses from 8 to 12mm with guaranteed impact performance at 0 and -20 °C.

Typical uses

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

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
- 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	8mm – 12mm		
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	0.75		
Manganese	1.70		
Phosphorus	0.16		
Sulfur	0.03		
Chromium	1.05		
Nickel	0.55		
Copper	0.50		
Molybdenum	0.10		
Aluminium	0.100*		
Titanium	0.040		
CEQ (IIW)	0.49		

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)		
		8 ≤ t ≤ 12		
Yield Strength (MPa)	Guaranteed Min	340		
Tensile Strength (MPa)	Guaranteed Min	450		
Elong. On 5.65√S₀ (%)	Guaranteed Min	20		

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



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1800 800 789

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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.

^{*} Values shown refer to the BlueScope internal standard

^{**} Niobium + Titanium + Vanadium $\stackrel{\cdot}{\leq} 0.15\%$

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