Uncoated steel
Datasheet

June 2020. This literature supersedes all previous issues

REDCOR®
weathering steel (plate)
AS/NZS 3678 - WR350A, WR350L0A

General description
WR350A is a high phosphorous structural weathering steel with nominal yield strength of 340MPa for thicknesses from 8 to 12mm with an option for guaranteed impact performance at 0^0C.

Typical uses
- Non-structural architectural applications such as solid façades, walls, perforated screens, light sculptures, landscaping features, fences, signage, noise wall barriers.

Features & benefits
- Reduced atmospheric corrosion when used in the correct environments
- Guaranteed minimum strength levels
- 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 (R2016)
ISO 9001:2015 Quality System certified

Normal / optional supply conditions

	Normal	Optional
Thickness Range	8mm – 12mm	-
Length Range	By enquiry only	-
Availability	By enquiry only	-
Edge Condition	Trimmed	-
Tolerances	AS/NZS 1365:1996 (R2016)	-
Ultrasonic Inspection	-	AS 1710:2007 (R2017)
Surface Inspection	BlueScope	-
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

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

* Values shown refer to the BlueScope internal standard
** Niobium + Titanium + Vanadium ≤ 0.15%

Mechanical properties

Tensile Properties (Transverse)		Thickness (mm)
		8 ≤ t ≤ 12
Yield Strength (MPa)	Guaranteed Min	340
Tensile Strength (MPa)	Guaranteed Min	450
Elongation 5.65$\sqrt{S_0}$ (%)	Guaranteed Min	20

Charpy Impact Properties	Longitudinal on 10 x 10mm test piece	Test Temperature (ºC)	Absorbed Energy (joules)	
			Avg. of 3	Individual
Guaranteed Min	WR350L0A	0	27	20

Fire hazard properties

Test & Evaluation Method	Result
Combustibility test for materials (AS 1530.1-1994 (R2016))	Not deemed combustible

RedCor®

steel.com.au/redcor
To learn more about this product

1800 024 402
steeldirect@bluescopesteel.com
For more information contact Steel Direct

9 320075 089689

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