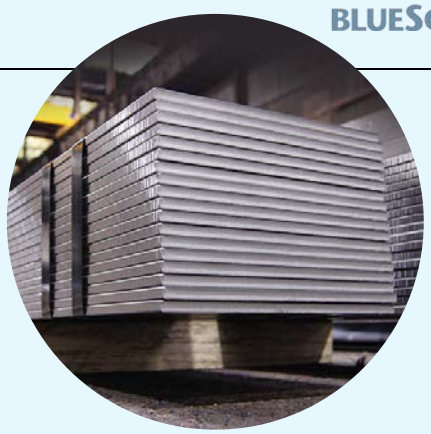
Uncoated Steel
Data Sheet

February 2018. This literature supersedes all previous issues



EMBAR® steel AS/NZS 3679.1-300

General description
A medium strength structural steel product with nominal yield strength of 300 MPa

Typical uses
- General fabrication
- Structural members

Australian and International Standards
AS/NZS 3679.1: 2016
AS/NZS 1365: 1996
ISO 9001 Quality System certified

Features & benefits
- Flat Bar up to 12mm in thickness has a precision machined edge
- Flat Bar 16-25mm in thickness has a thermal cut edge
- ACRS Accreditation 160403

Warnings
- This material should be used in conjunction with the appropriate design and welding standards
- This material contains Silicon. Care should be used in fabrication as surface appearance will be different to plain Aluminium killed steels when galvanised.

Supply conditions

	Precision Machined Edge	Thermal Cut Edge	Optional
Thickness Range	5mm – 12mm	16, 20 & 25 mm.	
Availability	22 Standard Sizes	9 Standard Sizes	Other sizes by enquiry
Edge Condition	Machined Edge	Thermal Cut Edge	
Tolerances	AS/NZS 3679.1:2016	AS/NZS 3679.1:2016	
Surface Inspection	BlueScope	BlueScope	Third party
Certification	BlueScope	BlueScope	Third party endorsed

Optional supply conditions may be subject to dimensional restrictions

Chemical composition

Element	Guaranteed Maximum %
Carbon	0.25
Silicon	0.50
Manganese	1.60
Phosphorus	0.040
Sulfur	0.040
Chromium	0.30
Nickel	0.50
Copper	0.50
Molybdenum	0.10
Aluminium	0.10
Niobium*	0.020
Titanium	0.040
CEQ (IIW)	0.44

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

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

* Niobium + Titanium + Vanadium ≤ 0.15%

Mechanical properties

	Thickness (mm)		
Guaranteed Minimum Property	t < 11	**11 ≤ t ≤ 17**	17 < t ≤ **25**
Yield Strength (MPa)	320	300	280
Tensile Strength (MPa)	440	440	440
Elong. On 5.65$\sqrt{S_0}$ (%)	22	22	22

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