

# Uncoated Steel

## Data Sheet



February 2018. This literature supersedes all previous issues



# EMBAR<sup>®</sup> 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

| Guaranteed Minimum Property       | Thickness (mm) |             |             |
|-----------------------------------|----------------|-------------|-------------|
|                                   | t < 11         | 11 ≤ t ≤ 17 | 17 < t ≤ 25 |
| Yield Strength (MPa)              | 320            | 300         | 280         |
| Tensile Strength (MPa)            | 440            | 440         | 440         |
| Elong. On 5.65√S <sub>0</sub> (%) | 22             | 22          | 22          |

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1800 800 789

For more information call Steel Direct



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