300 AS 3679.1 (Australia)

Standards

AS 3679.1 — Structural steel - Hot-rolled bars and sections

Chemical composition

C	< 0.25	**Si**	< 0.5	**Mn**	< 1.6	**P**	< 0.04
S	< 0.04	**Cr**	< 0.3	**Mo**	< 0.1	**Ni**	< 0.5
V	< 0.03	**Nb**	< 0.02	**Ti**	< 0.04	**Al**	< 0.15
Cu	< 0.5	**Fe**	Rest	**CE**	< 0.44		

CE = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15
Cu + Ni + Cr + Mo < 1.00%
Nb + V < 0.03
Al may be replaced by other grain refining elements
Ti + Nb + V < 0.15

Properties

By AS/NZS 3679.1

Flats and sections

Thickness: < 11 mm ;

Yield Strength: > 320 MPa
Tensile Strength: > 440 MPa
Elongation: > 22 %

Thickness: 11 - 17 mm ;

Yield Strength: > 300 MPa
Tensile Strength: > 440 MPa
Elongation: > 22 %

Thickness: 17 - 40 mm ;

Yield Strength: > 280 MPa
Tensile Strength: > 440 MPa
Elongation: > 22 %

Thickness: > 40 mm ;

Yield Strength: > 280 MPa
Tensile Strength: > 440 MPa
Elongation: > 22 %

Hexagons, rounds and squares

Thickness: < 50 mm ;

Yield Strength: > 300 MPa

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Tensile Strength: > 440 MPa
Elongation: > 22 %

Thickness: 50 - 100 mm ;

Yield Strength: > 290 MPa
Tensile Strength: > 440 MPa
Elongation: > 22 %

Thickness: > 100 mm ;

Yield Strength: > 280 MPa
Tensile Strength: > 440 MPa
Elongation: > 22 %

Calculated properties

Density: 7.83 g/cm3