

Hot Rolled - HR

Structural - S

GENERAL DESCRIPTION

Hot-rolled, extra deep drawing steel guaranteed non-ageing, suitable for severe drawing and pressing.

AUSTRALIAN STANDARDS

AS/NZS 1594: 2002

AS/NZS 1365: 1996

TYPICAL USES

- Automatic components
- Mower parts

WARNINGS

- Surface finish affects the drawing performance of this material. Pickling is recommended.

NORMAL / OPTIONAL SUPPLY CONDITIONS

	Normal	Optional
Thickness Range	1.8mm – 6mm	
Width Range	801mm – 1200mm	
Surface Finish	Hot-rolled	Pickled and Oiled Pickled not Oiled
Edge Condition	Untrimmed (Mill Edge)	Trimmed
Tolerances	AS/NZS 1365: 1996	
Flatness	Class A	
Certification	BlueScope Steel – Analysis and Mechanical tests	

Optional supply conditions may be subject to dimensional restrictions.

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CHEMICAL COMPOSITION

Element	Guaranteed Maximum %	Typical %
		1.8mm – 6mm
Carbon	0.08	0.06
Silicon	0.03*	0.01
Manganese	0.40	0.22
Phosphorus	0.030	0.016
Sulfur	0.020	0.01
Aluminium	0.100	0.045
CEQ (IIW)	-	0.102

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 refer to the BlueScope Steel internal standard, where the AS/NZS 1594 guaranteed maximum % is 0.35

MECHANICAL PROPERTIES

Tensile Properties (Longitudinal)	Guaranteed Minimum	Typical %	
		1.8mm – 3mm	>3mm – 6mm
Yield Strength (MPa)	170	210 - 270	
Tensile Strength (MPa)	280	335 - 370	
Elong. (%) on 80mm	34	37 – 41	
Elong. (%) on 80mm	36		37 - 42
180° Bend (Transverse)	0t	-	

DIMENSIONS

Width Range (mm)	Thickness Range (mm)
801 – 1200mm	1.8 – 6mm

Not all thickness and width combinations are available.

WELDABILITY GROUP

WTIA Group
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Refer to WTIA Technical Note 1 or AS/NZS 1554.1