

## Hot Rolled - HR

## Structural - S

### GENERAL DESCRIPTION

Hot-rolled structural product with minimum yield strength of 200MPa, good ductility and good weldability.

### AUSTRALIAN STANDARDS

AS/NZS 1594: 2002  
AS/NZS 1365: 1996

### TYPICAL USES

- Structural members
- Roll forming applications
- Brake press forming applications
- General fabrications

### NORMAL / OPTIONAL SUPPLY CONDITIONS

	Normal	Optional
Thickness Range	1.6mm – 12mm	
Width Range	910mm – 1550mm	
Surface Finish	Hot-rolled	
Edge Condition	Untrimmed (Mill Edge)	Trimmed Pickled and Oiled Pickled not Oiled
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 %	
		1.6mm – 8mm	>8mm – 12mm
Carbon	0.15	0.055	0.10
Silicon	0.030*	0.003	0.003
Manganese	0.60	0.21	0.45
Phosphorus	0.030	0.015	0.015
Sulfur	0.030	0.010	0.010
Aluminium	0.10	0.035	0.030
CEQ (IIW)	0.29	0.095	0.190

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 %		
		1.6mm-3mm	>3mm-6mm	>6mm-12mm
Yield Strength (MPa)	200	220 – 290		
Tensile Strength (MPa)	300	330 – 390		
Elong. (%) on 80mm	22	30 – 38		
Elong. (%) on 80mm	26		35 – 45	
Elong. (%) on 200mm	19			30 – 40
180° Bend (Transverse)	0t	0t		
180° Bend (Transverse)	1t			0t

### DIMENSIONS

Width Range (mm)	Thickness Range (mm)
750 – 1550	1.6 – 12

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

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