# **Hot Rolled** Structural

HA350 steel

Revision 6, November 2003 This literature supersedes all previous issues

#### **GENERAL DESCRIPTION**

HA350 - Hot-rolled Structural steel with a guaranteed minimum yield strength of 350 MPa, with good ductility.

#### **TYPICAL USES**

Structural sections, racking, truck chassis and gas cylinders.

#### **AUSTRALIAN STANDARDS**

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

#### **GUARANTEED PROPERTIES OF STEEL BASE**

MECHANICAL PROPERTIES	GUARANTEED
Longitudinal tensile Yield strength, MPa Tensile strength, MPa	350 min 430 min
Elong on 80 mm, % ≤ 3.0 mm > 3.0 mm	16 min 20 min
180° transverse bend (L axis) ≤ 5.0 mm > 5.0 mm	2t 3t

CHEMICAL PROPERTIES	GUARANTEED MAXIMUM %	TYPICAL %
Carbon (C) Silicon (Si) Manganese (Mn) Phosphorus (P) Sulphur (S) Aluminium (Al) Nitrogen (N) Niobium (Nb) Vandadium Niobium + Vanadium	0.20 0.35 1.60 0.04 0.03 0.10	0.08 - 0.11 0.010 - 0.015 0.50 - 0.60 0.01 - 0.02 0.008 - 0.015 0.02 - 0.04 0.002 - 0.005 0.03 - 0.04
+ Titanium (Nb+V+Ti)	0.15	-

#### **DIMENSIONAL CAPABILITIES**

Preferred Thickness,		Width Range, mm																		
mm	900 1000 1100		00	12	00	00 13		14	1400		1500		00	1700		00 1800				
13																				
10																				
8																				
6																				
5																				
4.5																				
4																				
3.5																				
3																				
2.5																				
2																				
1.6																				
1.5																				

Note: Widths in the range 50 to 865mm are available by negotiation only.

Key available black only available pickled These dimensions are a reflection of technical capability to produce. Supply conditions may be subject to dimensional restrictions and is subject to BlueScope Steel Sales and Marketing confirmation.

#### **NORMAL/OPTIONAL SUPPLY CONDITIONS**

	Normal	Optional <sup>#</sup>
Surface finish	As-rolled	Pickled & Oiled
Tolerance class		
Thickness	AT	-
Width	AW	ME
Length	-	-
Flatness	AF	-
Oiling	Not oiled	Oiled
Branding	Not branded	-

# Optional supply conditions may be subject to dimensional restrictions.

#### **FABRICATING PERFORMANCE**

Method	Rating
Bending	3
Drawing	2*
Pressing	2*
Roll-forming	3
Welding	5
Painting (Pretreatment)	5
Galvanizing	5

Surface scale adversely affects die performance of this product, pickled recommended.

where  $\mathbf{1} = \text{limited to } \mathbf{5} = \text{excellent},$  or  $\mathbf{NR} = \text{not recommended}.$ 

Note: It is recommended that customers use product promptly to avoid the possibility of rusting during storage. Oiling improves corrosion resistance but oiled product should be used within three months.

BlueScope is a trade mark of BlueScope Steel Limted.

Please ensure you have the current data sheet for this product as displayed at www.bluescopesteel.com.au

# **BlueScope Steel Limited**

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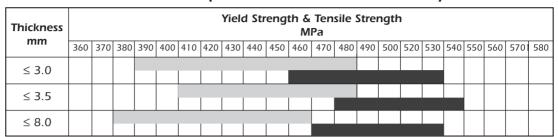
# Hot Rolled Structural HA350 steel

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**Continued** 

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## TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)





Thickness		Total Elongation (%)																					
mm	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
≤ 3.0																							
≤ 3.5																							
≤ 8.0																							

**Note:** Typical mechanical properties are based on aggregation of  $\overline{X}$  and 2SD performance.

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