

Hot Rolled Structural HA350 steel

HR S

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	CHEMICAL PROPERTIES	GUARANTEED MAXIMUM %	TYPICAL %
Longitudinal tensile		Carbon (C)	0.20	0.08 - 0.11
Yield strength, MPa	350 min	Silicon (Si)	0.35	0.010 - 0.015
Tensile strength, MPa	430 min	Manganese (Mn)	1.60	0.50 - 0.60
		Phosphorus (P)	0.04	0.01 - 0.02
Elong on 80 mm, %		Sulphur (S)	0.03	0.008 - 0.015
≤ 3.0 mm	16 min	Aluminium (Al)	0.10	0.02 - 0.04
> 3.0 mm	20 min	Nitrogen (N)	-	0.002 - 0.005
180° transverse bend (L axis)		Niobium (Nb)	-	0.03 - 0.04
≤ 5.0 mm	2t	Vandadium	0.10	-
> 5.0 mm	3t	Niobium + Vanadium + Titanium (Nb+V+Ti)	0.15	-

DIMENSIONAL CAPABILITIES

Preferred Thickness, mm	Width Range, mm									
	900	1000	1100	1200	1300	1400	1500	1600	1700	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.

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.

Key	 available black only	 available pickled
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NORMAL/OPTIONAL SUPPLY CONDITIONS

	Normal	Optional [#]
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 **1** = limited to **5** = excellent, or **NR** = 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 Limited.

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

BlueScope Steel Limited

BlueScope Steel Limited ABN 16 000 011 058
BlueScope Steel (AIS) Pty Ltd ABN 19 000 019 625

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SYDNEY: (02) 9795 6700 MELBOURNE: (03) 9586 2222 BRISBANE: (07) 3845 9300 ADELAIDE: (08) 8243 7333 PERTH: (09) 9330 0666

Produced by Artimprint (02) 9984 8586



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TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)

Thickness mm	Yield Strength & Tensile Strength MPa																					
	360	370	380	390	400	410	420	430	440	450	460	470	480	490	500	520	530	540	550	560	570	580
≤ 3.0																						
≤ 3.5																						
≤ 8.0																						

Key	 yield strength	 tensile strength
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Thickness mm	Total Elongation (%)																						
	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 \bar{X} and 2SD performance.

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