

Hot Rolled Structural HA250 steel

HR S

Revision 6, November 2003

This literature supersedes all previous issues

GENERAL DESCRIPTION

HA250 - Hot-rolled Structural steel with a guaranteed minimum yield strength of 250 MPa, with good ductility.

TYPICAL USES

Structural sections, light poles, guard rails 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	0.09 - 0.17	
Yield strength, MPa		250 min	Silicon (Si)	0.35	0.005 - 0.015	
Tensile strength, MPa		350 min	Manganese (Mn)	1.20	0.50 - 0.75	
Elong on 80 mm, %			Phosphorus (P)	0.04	0.005 - 0.025	
≤ 3 mm		20 min	Sulphur (S)	0.03	0.005 - 0.015	
> 3 mm		24 min	Aluminium (Al)	0.10	0.015 - 0.060	
180° transverse bend (L axis)			Nitrogen (N)	-	-	
≤ 5.0 mm		1t	Titanium (Ti)	0.04	-	
> 5.0 mm		2t	Niobium (Nb)	0.01	-	
			Niobium + Vanadium (Nb) (V)	0.03	-	

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	4
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

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Produced by Artimprint (02) 9984 8586



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TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)

Thickness mm	Yield Strength & Tensile Strength MPa																						
	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	440	450	460	
≤ 3.0																							
≤ 8.0																							

Key	 yield strength	 tensile strength
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Thickness mm	Total Elongation (%)															
	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
≤ 3.0																
≤ 8.0																

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

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