

# Hot Rolled Carbon HA1006 steel

# HR C

Revision 7, November 2003

This literature supersedes all previous issues

## GENERAL DESCRIPTION

HA1006 - Hot-rolled Carbon steel with a guaranteed chemical composition, good ductility and good weldability.

## TYPICAL USES

Vitreous enamelled hot water 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)	0.08	0.04 - 0.07
Yield strength, MPa	-	Silicon (Si)	0.03	0.005 - 0.010
Tensile strength, MPa	-	Manganese (Mn)	0.40	0.20 - 0.30
Elong on 80 mm, %	-	Phosphorus (P)	0.04	0.01 - 0.02
180° transverse bend (L axis)	-	Sulphur (S)	0.03	0.01 - 0.02
		Aluminium (Al)	0.10	0.03 - 0.05
		Titanium (Ti)	0.04	-
		Nitrogen (N)	-	0.001 - 0.005

## 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.  
\* HA4N is not available pickled less than 2.00mm thickness.

**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.**

<b>Key</b>	 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	4
Drawing	3*
Pressing	3*
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](http://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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Produced by Artimprint (02) 9984 8586



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**Continued**

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## TYPICAL PROPERTY RANGES (FOR NORMAL SUPPLY PRODUCT)

Thickness mm	Yield Strength & Tensile Strength MPa																					
	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410
< 1.9																						
≤ 3.0																						
≤ 8.0																						

<b>Key</b>	 yield strength	 tensile strength
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Thickness mm	Total Elongation (%)																						
	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
< 1.9																							
≤ 3.0																							
≤ 8.0																							

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

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