

# Hot Rolled Formable

# HR F

## BRIGHTFORM® steel

Revision 5, November 2003

This literature supersedes all previous issues

### GENERAL DESCRIPTION

BRIGHTFORM® - Pickled, skin-passed low carbon steel with a good surface, suitable for bending and moderate drawing and pressing.

### TYPICAL USES

Tubing, shelving, simple pressings, hidden appliance panels and distributor stock.

### AUSTRALIAN STANDARDS

AS/NZS 1365/1996

### GUARANTEED PROPERTIES OF STEEL BASE

MECHANICAL PROPERTIES	GUARANTEED
Transverse tensile	
Yield strength, MPa	-
Tensile strength, MPa	-
Elong on 80 mm, %	32 min
180° transverse bend (L axis)	0t

CHEMICAL PROPERTIES	TYPICAL %
Carbon (C)	0.04 - 0.07
Silicon (Si)	0.005 - 0.010
Manganese (Mn)	0.20 - 0.30
Phosphorus (P)	0.01 - 0.02
Sulphur (S)	0.01 - 0.02
Aluminium (Al)	0.03 - 0.05
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.

Key	available black only	available pickled

### NORMAL/OPTIONAL SUPPLY CONDITIONS

	Normal	Optional <sup>#</sup>
Surface finish	Pickled, Skin-passed	-
Tolerance class		
Thickness	AT	-
Width	ME	-
Length	-	-
Flatness	AF	-
Oiling	Oiled	-
Branding	Not branded	-

<sup>#</sup> Optional supply conditions may be subject to dimensional restrictions.

### FABRICATING PERFORMANCE

Method	Rating
Bending	5
Drawing	4
Pressing	4
Roll-forming	5
Welding	5
Painting (Pretreatment)	5
Galvanizing	5

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																				
	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360
≤ 2.0	Yield Strength										Tensile Strength										
≤ 3.0	Yield Strength										Tensile Strength										

<b>Key</b>	<span style="display:inline-block; width:15px; height:10px; background-color:lightgrey;"></span> yield strength	<span style="display:inline-block; width:15px; height:10px; background-color:black;"></span> tensile strength
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Thickness mm	Total Elongation (%)																					
	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
≤ 2.0	Yield Strength										Tensile Strength											
≤ 3.0	Yield Strength										Tensile Strength											

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

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