

## GENERAL INFORMATION

Revision 6, November 2003

This literature supersedes all previous issues

### GENERAL DESCRIPTION

Hot rolled products are available in five product groups; Formable, Extra Formable, Structural, Carbon and Hardness. The product designations are based on those of the Australian Standard AS/NZS 1594:2002 and are shown on page 2.

### SURFACE CHARACTERISTICS

The temperature at which hot-rolling is completed results in an oxidized strip surface. This oxide film is termed hot-mill scale.

Pickling removes the hot-mill scale. Pickled strip is generally supplied oiled to preserve this surface finish.

Skin-passing is a light cold rolling operation which suppresses the appearance of stretcher strain and minimizes coil break during uncoiling and subsequent processing. The surface texture and flatness are improved by skin passing.

### AGEING

Non ageing, or stabilized, steels, do not experience yield point reappearance during storage. Stretcher strain markings do not develop in these steels during pressing or drawing.

### STORAGE

The surface of pickled material is susceptible to atmospheric corrosion during storage. For this reason the normal supply condition is 'pickled and oiled', the thin layer of protective oil providing improved resistance to atmospheric corrosion.

When an oiled surface is not compatible with the customer's further processing requirements 'pickled and not oiled' may be supplied. In this case adherence to the following guidelines will minimize, but not prevent, the occurrence of surface corrosion:

- Packs must be kept dry;
- Packs must be stored under cover;
- The material should be used promptly after receipt;
- The material should not be stored as part coils after unpacking.

Where possible the guidelines for storage and use of 'pickled - not oiled' product should be used for 'pickled-oiled' to minimize the opportunity for surface corrosion.

### EDGE CONDITION

Mill edge strip (ME) is supplied with the hot-rolled edge intact. The width tolerances for mill edge strip are quite broad.

Side trimmed or slit material should be specified if tighter width tolerances are required. Mill edge strip is not normally available in widths less than 650mm.

### TOLERANCES

Width, length, and flatness tolerances are designated as Class A or Class B. These are abbreviated as AW, AL, and AF or BW, BL, and BF indicating compliance with the relevant class set out in Australian Standard AS1365. Class A tolerances are commercial tolerances and Class B are more stringent.

### DATA SHEETS

These data sheets are a guide to the availability, performance and properties of the BlueScope Steel range of hot rolled products at the time of printing. However, product variables can change from time to time and doubts should be referred to the nearest BlueScope Steel Limited Sales Office.

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

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# Hot Rolled Steel

# HR GI

## GENERAL INFORMATION **Continued**

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**This table is an EXPLANATION of the DESIGNATION SYSTEM ONLY**  
**It does not imply that all combinations are available**

Regularly available products are listed in the Data Sheets

GROUPS	CHARACTER POSITION					
	1	2	3	4	5	6
Formable Steels	Product Type	Steel Type	Degree of Formability	Condition		Surface Finish
	H - Hot rolled	A - Aluminium killed U - Unspecified	1 - Commercial 2 - Commercial Drawing 3 - Deep Drawing 4 - Extra deep drawing	S - Skin-passed	N - Non-ageing (Stabilized)	P - Pickled
<b>Example</b>	<b>H</b>	<b>U</b>	<b>1</b>	<b>S</b>		<b>P</b>
Extra Formable Steels	Steel Type	Strength Minimum Yield Strength (MPa)				Surface Finish
	Xtraform	Numeral	Numeral	Numeral		P - Pickled
<b>Example</b>	<b>XF</b>	<b>4</b>	<b>0</b>	<b>0</b>		<b>P</b>
Structural Steels	Product Type	Steel Type	Strength Minimum Yield Strength (MPa)		Condition	Surface Finish
	H - Hot rolled	A - Aluminium killed W - Weather resistant U - Unspecified	Numeral	Numeral	Numeral	S - Skin-passed
<b>Example</b>	<b>H</b>	<b>U</b>	<b>3</b>	<b>0</b>	<b>0</b>	
Carbon Steels	Product Type	Steel Type	Unalloyed Carbon Steel		Carbon Indicator	
	H - Hot rolled	A - Aluminium killed K - Silicon / Aluminium killed	Numeral	Numeral	Numeral	Numeral
<b>Example</b>	<b>H</b>	<b>A</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>
Hardness	Product Type	Steel Type	Hardness Minimum Rockwell B			Surface Finish
	H - Hot rolled	A - Aluminium killed	Numeral	Numeral	T - Hardness achieved by temper rolling	P - Pickled
<b>Example</b>	<b>H</b>	<b>A</b>	<b>7</b>	<b>0</b>	<b>T</b>	<b>P</b>

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