Alloy: **BA170**

HAYES METALS

Chemical Compostion Limits:

Governing Specification:	**AS 1874-2000**
AAC Alloy Designation:	**BA170**

Element	Standard	
	Min %	Max %
Al	99.70	
Si		
Fe	Fe min. > 1.5 x Si	
Cu		
Mn		
Mg		
Cr		
Ni		
Zn		
Sn		
Pb		
Ti		
Fe & Si not included in other elements. Mn + Ti + Cr + V = 0.025% max.		
Others - each		0.03
Total Others		0.10

Hayes Metals Internal Product Code(s): C7102

Nearest Related Chemical Composition Specifications: (Guide only)

British Standard Alloy:

Aluminium Association (US) Alloy Type:

German Alloy:

Japanese (JIS) Alloy:

ISO Alloy:

Mechanical Properties of Test Bars:

Temper	Casting Method	Tensile Strength (MPa) Ult (min)	Ult (typ)	Yield (Mpa) (typ)	Elongation (% on 50 mm min) (min)	(typ)	Brinell Hardness (typ)

Recommended Heat Treatment Method:

Footnotes:
1. Nominal metal temperature should be obtained as rapidly as possible and maintained within ± 5°C during the time at temperature.
2. For maximum effectiveness of solution heat treatment, quench water should be kept as low as possible consistent with a minimum of 60°C.

Typical Physical Properties:

Density kg/m³ x 10³	Thermal Conductivity at 25°C W/m.K	Freezing Range Approx. °C Solidus	Liquidus	Electrical Conductivity at 20°C %IACS Equal Volume	Average Coefficient of Thermal Expansion per °C

Relative Ratings: (Ratings: Excellent - Good - Fair - Unsuitable)

Corrosion Resistance	Weldability (see footnote 1)	Pressure Tightness	Machin-ability	Castability By Method of Casting Sand Cast	Gravity Die	Pressure

Footnotes:
1. Unsoundness in castings may adversely affect the weldability rating.
2. Corrosion Resistance ratings refer to atmospheric corrosion.

Typical Uses / General Comments:

High purity aluminium for use in electrical applications such as cast rotors in electrical motors.