

Alloy: **AA335**



Chemical Composition Limits:

Governing Specification:	AS 1874-2000
AAC Alloy Designation:	AA335

Hayes Metals Internal	D6335
Product Code(s):	

Element	Standard	
	Min %	Max %
Al	Remainder	
Si	9.6	12.0
Fe		0.9
Cu	1.5	3.5
Mn		0.50
Mg		0.30
Cr		0.10
Ni		0.50
Zn		1.0
Sn		0.30
Pb		0.25
Ti		0.20
Footnote: The Fe max relates to ingot. The max Fe for castings may be higher. Refer the standard.		
Others - each		0.05
Total Others		0.20

Nearest Related Chemical Composition Specifications: (Guide only)

British Standard Alloy:

Aluminium Association (US) **383**
Alloy Type:

German Alloy:

Japanese (JIS) Alloy: **ADC12**

ISO Alloy:

Mechanical Properties of Test Bars:

Temper	Casting Method	Tensile Strength (MPa)	
		Ult (min)	Ult (typ)
F1	Pressure Diecast		250

Yield (Mpa) (typ)	Elongation (% on 50 mm min)		Brinell Hardness (typ)
	(min)	(typ)	
		3	80

Recommended Heat Treatment Method:

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- Footnotes:**
- Nominal metal temperature should be obtained as rapidly as possible and maintained within $\pm 5^{\circ}\text{C}$ during the time at temperature.
 - 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	Thermal Conductivity	Freezing Range	
		Solidus	Liquidus
$\text{kg/m}^3 \times 10^3$	at 25°C W/m.K	Approx. $^{\circ}\text{C}$	
2.70	100	525	570

Electrical Conductivity at 20°C	Average Coefficient of Thermal Expansion
%IACS Equal Volume	per $^{\circ}\text{C}$
26	20.0

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

Corrosion Resistance	Weldability (see footnote 1)	Pressure Tightness	Machinability	Castability By Method of Casting		
				Sand Cast	Gravity Die	Pressure
Fair	Unsuitable	Good	Fair			Excellent

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

Typical Uses / General Comments:

Widely used pressure diecasting alloy with high fluidity used for automotive components.

The alloy data given above has been prepared by Hayes Metals for use by its customers and associates as a guide to this alloy's typical properties. For editorial reasons the given specifications may not include all the minute details of the governing specification and therefore at any dispute or query, the relative original Specification should be consulted.