

Alloy: **CA605**



**Chemical Composition Limits:**

Governing Specification:	AS 1874-2000
AAC Alloy Designation:	CA605

Hayes Metals Internal	D6605
Product Code(s):	

Element	Standard	
	Min %	Max %
Al	Remainder	
Si	9.0	10.0
Fe	0.7	1.1
Cu		0.6
Mn		0.35
Mg	0.45	0.6
Cr		
Ni		0.50
Zn		0.50
Sn		0.15
Pb		
Ti		
Others - each		0.05
Total Others		0.25

Nearest Related Chemical Composition Specifications: (Guide only)

British Standard Alloy:

Aluminium Association (US) **360**  
Alloy Type:

German Alloy: **AlSi10MgFe**

Japanese (JIS) Alloy:

ISO Alloy:

**Mechanical Properties of Test Bars:**

Temper	Casting Method	Tensile Strength (MPa)	
		Ult (min)	Ult (typ)
F1	Pressure Diecast		325

Yield (Mpa) (typ)	Elongation (% on 50 mm min) (typ)	Brinell Hardness (typ)
170	3	75

**Recommended Heat Treatment Method:**

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- Footnotes:**
1. Nominal metal temperature should be obtained as rapidly as possible and maintained within  $\pm 5^{\circ}\text{C}$  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  $60^{\circ}\text{C}$ .

**Typical Physical Properties:**

Density	Thermal Conductivity	Freezing Range	
		Solidus	Liquidus
$\text{kg/m}^3 \times 10^3$	at $25^{\circ}\text{C}$ W/m.K		
2.68	151	555	595

Electrical Conductivity at $20^{\circ}\text{C}$	Average Coefficient of Thermal Expansion
%ACS Equal Volume	per $^{\circ}\text{C}$
37	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
Good	Unsuitable	Excellent	Fair			Excellent

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

**Typical Uses / General Comments:**

General purpose alloy having excellent casting ability and good corrosion resistance suitable for motor housings, cover plates, instrument cases, marine and road transport fittings, aircraft and general purpose castings.

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.