SL METALS CORPORATION

Secondary Aluminum Alloy A380

This reference document enables SL Metals customers and commercial counterparts in USA, Japan, China, Europe, and South America to know parameters of A380 as one of the most widely specified aluminum die-casting alloys in North American and global markets. Its elevated copper content delivers superior tensile strength and excellent machinability, making it a preferred choice for structural and load-bearing die-cast components. SL Metals Corporation supplies A380 ingots to ASTM B85 specification with full Certificate of Analysis per shipment.

Chemical Composition

All values in weight percent (wt.%). Actual CoA provided per shipment.

Element	Range / Limit
Silicon (Si)	7.5 – 9.5 %
Copper (Cu)	3.0 – 4.0 %
Iron (Fe)	≤ 1.3 %
Zinc (Zn)	≤ 3.0 %
Manganese (Mn)	≤ 0.50 %
Magnesium (Mg)	≤ 0.10 %
Nickel (Ni)	≤ 0.50 %
Tin (Sn)	≤ 0.35 %
Others (total)	≤ 0.50 %
Aluminum (Al)	Balance (~80–89.5%)

Mechanical Properties (As-Cast / Die-Cast)

Property	Typical Value
Tensile Strength	310 – 330 MPa
Yield Strength	150 – 170 MPa
Elongation	2.5 – 4 %
Hardness	~80 HB

Physical Properties

Property	Value
Density	~2.71 g/cm³
Thermal Conductivity	~96 W/m·K
Electrical Conductivity	~23% IACS
Thermal Expansion	~21–22 µm/m·°C

Casting & Processing Data

Parameter	Value
Casting Temperature	635 – 704 °C
Fluidity	Excellent
Pressure Tightness	Good
Machinability	Excellent

Packaging

Format	Weight
Standard Ingot	5.0 – 15.0 kg
Sow (low profile)	720 – 750 kg

Typical Applications

Automotive structural parts, Gearbox housings, Power tool bodies, Industrial machinery, Electrical enclosures, Marine hardware. And etc.

International Standard Equivalents

Region	Standard	Designation
USA	ASTM B85	A380 / 380
Japan	JIS H 2118	ADC10
Europe	EN 1706	AC-46200 (AlSi8Cu3)
China	GB/T 15115	YL102



Contact & Quote Requests

To receive a competitive offer, please provide:

- Alloy grade or local standard designation
- Quantity (MT or FCL)
- Destination port
- Packaging preference
- Company introduction

SL Metals Corporation | 134 S. Dixie Hwy, Suite 212, Hallandale Beach, FL 33009, USA
Tel: +1.305.320.4433 | Email: info@slmet.com | Web: www.slmet.com
WeChat / WhatsApp available upon request