MATERIAL DATA SHEET - ALUMINIUM



BSC Die Casting & Finishing

better cast, better finish

MECHANICAL PROPERTIES	VALUE
Tensile Strength [Mpa]	320
Elongation [%/50mm]	1 - 3%
Hardness [Brinell]	85
Impact Resistance Izod [Nm]	3.4
Modulus of Elasticity [Mpa x 10 ³]	71
Shear Strength (N/mm 2)	195
PHYSICAL PROPERTIES	VALUE
Density [g/cm3]	2.79
Freezing Range [°C]	580-520
Coefficient of Thermal Expansion [per°C at 20-100°C]	0.000021
Thermal Conductivity [cal/cm 2 /cm/°C at 25°C]	0.23
Electrical Conductivity [% copper standard at 20°C]	24
Electrical Conductivity [% copper standard at 20 C]	27
COMPOSITION % BY WEIGHT	INGOT [CASTING]
COMPOSITION % BY WEIGHT	INGOT [CASTING]
COMPOSITION % BY WEIGHT Aluminium	INGOT [CASTING] Remainder
COMPOSITION % BY WEIGHT Aluminium Magnesium	INGOT [CASTING] Remainder 0.3
COMPOSITION % BY WEIGHT Aluminium Magnesium Copper	INGOT [CASTING] Remainder 0.3 3 - 4
COMPOSITION % BY WEIGHT Aluminium Magnesium Copper Iron (max)	INGOT [CASTING] Remainder 0.3 3 - 4 1.3
COMPOSITION % BY WEIGHT Aluminium Magnesium Copper Iron (max) Lead (max)	INGOT [CASTING] Remainder 0.3 3 - 4 1.3 0.3
COMPOSITION % BY WEIGHT Aluminium Magnesium Copper Iron (max) Lead (max) Tin (max)	INGOT [CASTING] Remainder 0.3 3 - 4 1.3 0.3 0.3
COMPOSITION % BY WEIGHT Aluminium Magnesium Copper Iron (max) Lead (max) Tin (max) Nickel (max)	INGOT [CASTING] Remainder 0.3 3 - 4 1.3 0.3 0.3 0.5
COMPOSITION % BY WEIGHT Aluminium Magnesium Copper Iron (max) Lead (max) Tin (max) Nickel (max) Zinc	INGOT [CASTING] Remainder 0.3 3 - 4 1.3 0.3 0.3 3 - 4 1.3 0.3 0.3 3 - 4 3.0

We hope you find this document helpful; please visit the "Zinc or Aluminium" section in the bottom of our High Pressure Die Casting page for more useful information.

Please feel free to contact one of the BSC team with any questions. Call 01922 710 070 www.bscdiecasting.co.uk