

DEFSTAN 02-838

Chemical Properties

Element	Chemical Composition %
Copper (Cu)	Balance
Tin (Sn)	5.0
Phosphorus (P)	0.2

Mechanical Properties

Condition	Typical Size Range (mm)	Proof Rp0.2 (MPa)	UTS Rm (MPa)	Elongation 5.65 Sqr So (%)	Hardness (HB)
Continuous Cast,	12 - 18	410 - 530	500 - 550	12 - 18	150 - 190
annealed and	> 18 - 40	380 - 480	460 - 500	12 - 20	135 - 165
cold	> 40 - 60	320 - 430	380 - 450	16 - 20	130 - 150
worked	> 60 - 75	250 - 400	350 - 425	18 - 25	120 - 150

Physical Properties

Property	Value
Young's Modulus	110 GPa
Density	8.8 g/cm ³
Melting Range	930 - 1060 °C
Coefficient of Linear Expansion (20 - 300 °C)	18 10 ⁻⁶ m/m °C
Thermal Conductivity	84 W / m K
Electrical Conductivity	20% IACS
Electrical Resistivity	0.086 10 ⁻⁶ Ωsm
Specific Heat	380 J/kg K

Disclaimer

This data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product and product dimensions. All information is based on our present knowledge and is given in good faith. No liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.

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