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CuSn12

TECHNICAL DATA

NOMINAL COMPOSITION	**Copper**	Remaining
	Tin	12.0% ± 1.0
	Phosphorus	0.205% ± 0.195
PHYSICAL PROPERTIES	**Color**	Copper-Yellow
	Solidus	1517°F (825°C)
	Liquidus	1814°F (990°C)
	Recommended Brazing Temperature	1864-1914°F (1018-1046°C)
	Density (lbs./in^3)	0.32
	Specific Gravity	8.80
	Modulus of Elasticity (GPa)	103.9
	Thermal Conductivity (W/m•°C)	58.6
	Specific Electrical Resistivity (Ωmm^2/m)	0.17
	CTE (20-200°C) (10^{-6}/°C)	18

USES

CuSn12 is a copper-tin filler metal used for brazing ferrous alloys, such as steel. This alloy is typically used in furnace brazing of steels where use of pure copper is not permissible.

BRAZING CHARACTERISTICS

CuSn12 has good wetting characteristics on ferrous based materials, in particular stee,l in furnace brazing applications. Maximum strength and joint integrity are obtained where joint clearance falls within the range of 0.003in. – 0.006in., but given its wide melt range, CuSn12 can be used for applications with clearances above 0.006in. as well.

PROPERTIES OF BRAZED JOINTS

The properties of a brazed joint are dependent upon numerous factors including base metal properties, joint design, metallurgical interaction between the base metal and the filler metal.

SPECIFICATIONS

CuSn12 alloy conforms to: CEN/TS 13388 CuSn12, EN 13347 CuSn12 and ISO 17672 Cu 925

AVAILABLE FORMS

Wire, strip, engineered preforms, specialty preforms per customer specification, powder and paste.

Individuals requiring further information and Engineering Specification Documents may wish to contact the Engineering Society for Advanced Mobility, Land Sea Air and Space, The Society of Automotive Engineers http://www.sae.org/ (SAE AMS) or The American Welding Society (AWS) http://aws.org/

NOTE:

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