COPPER ALLOY
JM 3
CuSn12-C

Composition

Element w/w	Cu %	Ni %	P %	Pb %	Sn %	Al %	Fe %	Mn %	S %	Sb %	Si %	Zn %
min.	85,0				11,0[1]							
max.	88,5[1]	2,0	0,6	1,0	13,0	0,01	0,2	0,2	0,05	0,15	0,01	0,5

[1] For continuous castings and centrifugal castings, the minimum tin content shall be 10,5%, and the maximum copper content for castings shall be 89,0%

Mechanical properties

Casting process and designation	Proof Strength $Rp_{0,2}$ [MPa]	Tensile strength R*m* [MPa]	Elongation A_5 [%]	Brinell hardness HBW [HB]
-03 (sand)	≥130	≥240	≥7	≥80
-15 (continuous)	≥150	≥270	≥5	≥90
-15 (centrifugal)	≥150	≥270	≥5	≥90

Physical properties

Density [g/cm^3]	Young's modulus [GPa]	Thermal conductivity [W/mK]	Electrical conductivity [%IACS]
8,8	100	50	10

Fabrication properties

Machinability	Weldability	Solderability	Stress-relieving temperature
Very good	Not recommended	Excellent	260 °C

Applications

Worm wheels, gears and bushings for heavy loads and low speeds

Comparable standards

Swedish standard	SS-EN 1982	CC483K
European standard	EN 1982	CC483K
US standard	UNS	C90800
British standard (old)	BS	1400 PB2
German standard (old)	DIN	1705 CuSn12