

COPPER ALLOY

JM 3

CuSn12-C



Composition

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

Mechanical properties

Casting process and designation	Proof Strength $R_{p0,2}$ [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