

DATA SHEET:

Tin bronze: EN 1982: CuSn12-C (CC483K) (TP12)

Correspondence of Standards: ASTM B 427, UNS C90800, SIS 145465, BS 1400 PB2

Typical mechanical properties: (GZ=Centrifugal casting, GC=Continuous casting)

Min values	0,2 %-proof strength N/mm ²	Tensile strength N/mm ²	Elongation A %	Hardness HB
GZ	150	280	5	90
GC	150	300	6	90

Physical properties:

Density kg/dm	Coefficient thermal expansion 10 ⁻⁶ x 1/K	Thermal conductivity W/Km	Resistivity nΩm
8.8	18	50	190

Corrosion resistance: (Relative scale for copper alloys: 1 – 5, where 5 means best resistance)

Air, fresh water	Sea water	Soap solution, alcalic	Weak acids	Strong nonoxidizing acids
5	5	4	5	2

Nominal composition %:

	Cu	Sn	Pb	Zn	Ni	P	Fe	Si	Mn	Al	S	Sb
min.	85,0	10,5	-	-	-	-	-	-	-	-	-	-
max.	88,5	13,0	0,7	0,5	2,0	0,60	0,2	0,01	0,2	0,01	0,05	0,15

Recommended use:

Tough, resistant to wear and tear and sea water, good sliding properties. CuSn12-C has the best endurance and sliding properties of all tin bronzes.

USE

CuSn12-C is most suitable for quickly rotating and demanding spiral and toothed rims. Loading base value for continuously loaded centrifugal and continuous cast spiral rims is C="2...12,5" N/mm². For temporary loading according to sliding speed the value is C="40...45" N/mm². CuSn12-C is suitable for use as a sliding bearing especially when bearings must endure impact-like loading peaks (120 N/mm²), like in crankshaft- and toggle link bearings. It can also be used as sliding rails, in fast moving tension nuts under heavy load, in feed screw nuts of machine tools, cylinder bushings, ratchet- and guide bushings of rock drill machines, friction wheels, brake discs, couplings, etc.

Our customer service advices on material selection for different uses: info@keskipakovalu.fi and phone +358 3 357 9000.puh. 03-357 9000.