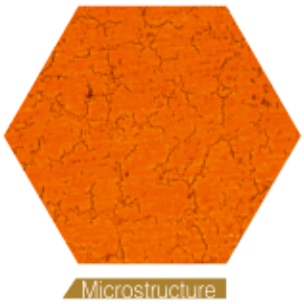

Microstructure

Alloy
CuSn12

iz-metal

Characteristics & Typical Applications

Tough and hard material with good wear resistance, also suitable for high sliding speeds. Good corrosion resistance (even in seawater). Especially suitable for parts that have to bear surface pressures and impacts at the same time and are also subjected to friction wear. Resistant to cavitation stress. Highly stressed worm rims, cylinder inserts, gibs and slide bars.

Chemical Composition

Elements	Cu	Sn	Ni	Pb	P	Zn	Mn	Fe	Sb	S	Al	Si
EN 1982	85,0 - 88,5	11,0 - 13,0	2,0 max	0,7 max	0,6 max	0,5 max	0,2 max	0,2 max	0,15 max	0,05 max	0,01 max	0,01 max
Average Nominal	86	11	1,5	0,5	0,4	0,25	0,2	0,1	0,02	0,01	0,01	0,01

Typical Mechanical Properties

		Continuous Cast	Centrifugal Cast
Tensile Strength Rm	MPa(min)	300	280
%0,2 Yield Stress	MPa(min)	150	150
Elongation	%(min)	6	5
Hardness	HB(min)	90	90

Physical Properties

Density Specific	Heat Capacity	Electrical Conductivity	Thermal Conductivity
8.77 gm/cm^3 at 20°C	377.1 J/kg. °K at 20°C	0.056 Mega Siemens/ cm at 20°C	70.6 W/m.°K at 20°C

Fabrication Processes

Joining Technique	Soldering	Brazing	Oxyacetylene Welding	Gas Shielded Arc Welding	Coated Metal Arc Welding	Machinability Rating
Suitability	Excellent	Good	Fair	Fair	Fair	20

Related Specifications

EN1982	ASTM B 427
CC483K	C90800

Tin Bronze