



CuSn12-C

General Tin Bronze Alloy (GBz 12)

Brand Name

KUPTIN 12

Standardization:

DIN EN 1982 / CC483K / C90800

ALLOY DESCRIPTION

CuSn12-C is a high hardness Tin-Bronze alloy that offers excellent wear resistance and corrosion resistance. Worm Gears are an ideal engineering material for bearings and shafts under heavy load, especially thanks to their structure that can withstand high surface pressures. It has excellent emergency operation capability (notlauf) and prevents damage to the shaft even in the event of a lack of lubrication.

CHEMICAL COMPOSITION (% WEIGHT)

Cu (%)	Sn (%)	P (%)	Pb (%)	Ni (%)	Zn (%)
85.0-89.0	11.0-13.0	max. 0.60	max. 0.70	max. 2.0	max. 0.50

MECHANICAL PROPERTIES (MIN.)

Tensile Strength (R_m)	280 - 300 [N/mm²]
Yield Strength ($R_{p0.2}$)	150 - 170 [N/mm²]
Elongation (A_5)	min. 5 - 10 [%]
Hardness (HBW)	min. 90 - 95 [HB]

PHYSICAL PROPERTIES

Density	8.60 [kg/dm³]
Melting Temperature	831 - 999 [°C]
Elk. Conductivity	~5 [MS/m]
Elasticity Modulus	90 - 110 [kN/mm²]

CASTING METHODS

GS	sand casting
GM	Permanent mold casting
GZ	Centrifugal casting
GC	continuous casting

AREAS OF APPLICATION

Worm Gears

High Load Bearing Bushings

Pressure Nuts

Precision Machine Spindles

Wear Plates

MACHINABILITY & CHARACTERISTICS

Its machinability is quite good and a hard and wear-resistant surface is obtained. It shows high resistance to sea water corrosion. It is recommended to keep the surface quality of the bearing steel shafts high during assembly.

The technical information specified in this document reflects the standard reference values of international EN and DIN norms. Deviations may be observed depending on final production conditions.

CORUM BRONZE

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