CuSn14-C

Tin Bronze

Brand Name
KUPTIN 14

Standardization:
DIN EN 1982 / CC485K / C9100 / C90800

ALLOY DESCRIPTION

CuSn14-C is the top class tin bronze alloy of the KUPTİN series developed for applications requiring high performance. Thanks to its high tin content, it offers higher hardness and wear resistance compared to CuSn12. It provides long-lasting, reliable performance, especially in plain bearing and slide systems that are exposed to high surface pressure and operate under heavy load. It also shows superior corrosion resistance against sea water.

CHEMICAL COMPOSITION (% WEIGHT)

Cu (%)	Sn (%)	Pb (%)	Ni (%)	P (%)	Zn (%)
Remainder	13.0-15.0	max. 0.50	max. 2.0	max. 0.20	max. 0.50

MECHANICAL PROPERTIES (MIN.)

Tensile Strength (R_m)	**280 - 310 [N/mm²]**
Yield Strength ($R_{p0.2}$)	**min. 140 [N/mm²]**
Elongation (A_5)	**min. 5 [%]**
Hardness (HBW)	**min. 95 [HB]**

PHYSICAL PROPERTIES

Density	**8.60 - 8.80 [kg/dm³]**
Melting Temperature	**820 – 980 [°C]**
Elk. Conductivity	**~4.5 [MS/m]**
Elasticity Modulus	**90 [kN/mm²]**

CASTING METHODS

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

AREAS OF APPLICATION

- Plain Bearings
- Slide and Sliding Plate Systems
- Shaft Bearings
- Heavy Load Machinery Parts
- Marine Equipment

MACHINABILITY & CHARACTERISTICS

The high tin content significantly increases the hardness and mechanical strength of the alloy compared to CuSn12; In this way, it provides stable and long-lasting performance in systems operating under high surface pressure. Meeting the demands of critical sectors such as energy, turbine systems, heavy industry, maritime and defense industry, this alloy offers a reliable engineering solution in harsh operating conditions.

CORUM BRONZE

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