



CuSn10Zn2-C

Red Bronze (RG 10)

Brand Name

CUPTIN R10

Standardization:

DIN EN 1982 / CC490K / C90500

ALLOY DESCRIPTION

CuSn10Zn2-C is a Red Bronze alloy that offers superior wear resistance, high corrosion resistance to seawater and reliable performance under heavy loads thanks to its high tin content. The addition of zinc increases castability and supports the overall corrosion resistance of the alloy. It is one of the most reliable choices in engineering practice for heavy load applications operating at low sliding speed.

CHEMICAL COMPOSITION (% WEIGHT)

| Cu (%) | Sn (%) | Zn (%) | Ni (%) | Pb (%) | P (%) |
|-----------|----------|---------|----------|----------|-----------|
| Remainder | 9.0-11.0 | 1.5-3.0 | max. 2.0 | max. 0.6 | max. 0.15 |

MECHANICAL PROPERTIES (MIN.)

| | |
|-------------------------------|-------------------------------------|
| Tensile Strength (R_m) | 270 - 310 [N/mm²] |
| Yield Strength ($R_{p0.2}$) | 130 - 160 [N/mm²] |
| Elongation (A_5) | min. 10 - 15 [%] |
| Hardness (HBW) | min. 85 - 100 [HB] |

PHYSICAL PROPERTIES

| | |
|---------------------|---------------------------------|
| Density | 8.80 [kg/dm³] |
| Melting Temperature | 850 - 1000 [°C] |
| Elk. Conductivity | 6 - 8 [MS/m] |
| Elasticity Modulus | 95 [kN/mm²] |

CASTING METHODS

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

AREAS OF APPLICATION

Pump and Turbine Impellers

Heavy Duty Bushings and Bearings

Worm Screw Systems

Cold Rolling Bearings

Marine Equipment

MACHINABILITY & CHARACTERISTICS

This alloy, which has excellent surface pressure resistance thanks to its high tin content, provides a long service life, especially in low speed and heavy load combinations. Addition of zinc improves casting quality by increasing fluidity. It can be used safely in corrosive environments, especially sea water.

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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