



# CuAl10Fe2-C

Aluminum Bronze

Brand Name

**CUPRAL 2**

Standardization:

**DIN EN 1982 / CC331G / C95200**

## ALLOY DESCRIPTION

CuAl10Fe2-C is a medium-high strength Aluminum Bronze alloy reinforced with iron additives. It is one of the most preferred types of aluminum bronze in engineering applications with its excellent corrosion resistance and good mechanical properties. The increased iron content compared to pure CuAl9 provides higher hardness and wear resistance, while the toughness values gained make it a material resistant to dynamic loads. It is suitable for both sand and mold casting.

## CHEMICAL COMPOSITION (% WEIGHT)

Cu (%)	Al (%)	Fe (%)	Mn (%)	Ni (%)	Zn (%)
Remainder	8.5-11.0	1.5-3.5	max. 1.0	max. 1.0	max. 0.5

## MECHANICAL PROPERTIES (MIN.)

Tensile Strength ( $R_m$ )	<b>500 - 600 [N/mm<sup>2</sup>]</b>
Yield Strength ( $R_{p0.2}$ )	<b>200 - 280 [N/mm<sup>2</sup>]</b>
Elongation ( $A_5$ )	<b>min. 12 - 20 [%]</b>
Hardness (HBW)	<b>min. 110 - 150 [HB]</b>

## PHYSICAL PROPERTIES

Density	<b>7.50 [kg/dm<sup>3</sup>]</b>
Melting Temperature	<b>1020 - 1050 [°C]</b>
Elk. Conductivity	<b>8 - 11 [MS/m]</b>
Elasticity Modulus	<b>120 [kN/mm<sup>2</sup>]</b>

## CASTING METHODS

GS	<b>sand casting</b>
GM	<b>Permanent mold casting</b>
GZ	<b>Centrifugal casting</b>
GC	<b>continuous casting</b>

## AREAS OF APPLICATION

General Machine Bushings

Pump and Valve Bodies

Sea Water Fixtures

Plain Bearings

Chemistry Equipment

## MACHINABILITY & CHARACTERISTICS

Iron additive provides higher mechanical strength by thinning the crystal structure compared to the CuAl9 alloy. This alloy can be used safely in equipment operating in a wide temperature range and in constructions exposed to corrosive environments. Its workability is good; The use of tungsten carbide or coated HSS tools is recommended.

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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