



# CuAl9-C

Aluminum Bronze

Brand Name

**CUPRAL 1**

Standardization:

**DIN EN 1982 / CC330G / C61400**

## ALLOY DESCRIPTION

CuAl9-C is an Aluminum Bronze alloy that offers high strength, excellent corrosion resistance and superior wear resistance. It is widely used in the marine, chemical and petrochemical industries thanks to its superior resistance to sea water, acids and various corrosive environments. Its ability to maintain its mechanical properties even at high temperatures makes this alloy extremely valuable for critical engineering applications.

## CHEMICAL COMPOSITION (% WEIGHT)

Cu (%)	Al (%)	Fe (%)	Mn (%)	Ni (%)	Zn (%)
Remainder	8.5-10.0	max. 1.5	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 - 250 [N/mm<sup>2</sup>]</b>
Elongation ( $A_5$ )	<b>min. 12 - 15 [%]</b>
Hardness (HBW)	<b>min. 110 - 130 [HB]</b>

## PHYSICAL PROPERTIES

Density	<b>7.60 [kg/dm<sup>3</sup>]</b>
Melting Temperature	<b>1030 - 1040 [°C]</b>
Elk. Conductivity	<b>8 - 10 [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

Sea Water Pumps

Propeller Blades

Valve Bodies

Chemical Industry Equipment

High Temperature Parts

## MACHINABILITY & CHARACTERISTICS

It is characterized by excellent corrosion resistance and high mechanical strength. It offers much higher tensile and yield strength compared to tin bronzes. It is especially suitable for long-term working conditions in salt water, acid and alkaline environments. Its machinability is moderate; The use of hard and sharp 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**

E-mail : [info@corumbronz.com](mailto:info@corumbronz.com) | Web : [www.corumbronz.com](http://www.corumbronz.com)