



# CuZn37Mn3Al2PbSi-C

Manganese Bronze

Brand Name

**KUZRAL 3**

Standardization:

**DIN EN 1982 / CC750S / C86300**

## ALLOY DESCRIPTION

CuZn37Mn3Al2PbSi-C is a multi-component high-strength brass alloy optimized by additions of manganese, aluminum, lead and silicon. While lead additive provides excellent machinability, manganese and aluminum increase the strength and corrosion resistance of the alloy. Silicon improves castability and surface quality. It is a balanced engineering material that stands out in terms of both mechanical performance and production efficiency.

## CHEMICAL COMPOSITION (% WEIGHT)

Cu (%)	Zn (%)	Mn (%)	Al (%)	Pb (%)	Si (%)
57.0-63.0	Remainder	2.0-4.0	1.0-3.0	0.2-1.5	0.2-0.8

## MECHANICAL PROPERTIES (MIN.)

Tensile Strength ( $R_m$ )	<b>600 - 750 [N/mm<sup>2</sup>]</b>
Yield Strength ( $R_{p0.2}$ )	<b>300 - 400 [N/mm<sup>2</sup>]</b>
Elongation ( $A_5$ )	<b>min. 8 - 12 [%]</b>
Hardness (HBW)	<b>min. 130 - 160 [HB]</b>

## PHYSICAL PROPERTIES

Density	<b>8.10 [kg/dm<sup>3</sup>]</b>
Melting Temperature	<b>870 - 900 [°C]</b>
Elk. Conductivity	<b>5 - 7 [MS/m]</b>
Elasticity Modulus	<b>105 [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

Worm Gears Plain Bearings

Valve and Armature Bodies

Automotive Components

General Machinery Parts

## MACHINABILITY & CHARACTERISTICS

It offers excellent workability thanks to its lead content; It increases productivity in machining processes. It is preferred as an alternative to tin bronze with its high strength and good corrosion resistance. Silicon additive increases fluidity, allowing the healthy production of complex casting geometries.

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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