



# CuSn8P

Phosphorescent Tin Bronze

Brand Name

**KUPTİN P8**

Standardization:

**EN ISO 5182 / CW452K / C52100**

## ALLOY DESCRIPTION

CuSn8P is the alloy of the KUPTİN P series with the highest tin content and the highest mechanical performance. Thanks to its 8% tin content, it offers superior elastic limit, fatigue strength and wear resistance. It is the premium class phosphor bronze preferred in the production of precision spring and vibration elements operating under high cyclic loading, heavy-duty electrical connectors and components in harsh mechanical conditions.

## CHEMICAL COMPOSITION (% WEIGHT)

Cu (%)	Sn (%)	P (%)	Pb (%)	Zn (%)	Fe (%)
Remainder	7.0-9.0	0.01-0.40	max. 0.05	max. 0.30	max. 0.10

## MECHANICAL PROPERTIES

Tensile Strength ( $R_m$ )	<b>390 - 450 [N/mm<sup>2</sup>]</b>
Yield Strength ( $R_{p0.2}$ )	<b>260 - 280 [N/mm<sup>2</sup>]</b>
Elongation ( $A_5$ )	<b>min. 6 [%]</b>
Hardness (HBW)	<b>120 - 160 [HB]</b>

## PHYSICAL PROPERTIES

Density	<b>8.80 [kg/dm<sup>3</sup>]</b>
Melting Temperature	<b>970 - 1040 [°C]</b>
Elk. Conductivity	<b>8 - 10 [MS/m]</b>
Elasticity Modulus	<b>110 [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

Heavy Duty Spring Elements

High Current Connectors

Vibration and Shock Absorber

Military/Defense Components

Precision Measuring Instruments

## MACHINABILITY & CHARACTERISTICS

Thanks to the highest tin content of the series, elastic limit and fatigue strength are maximized; This feature makes it ideal for precision mechanical parts operating under repeated stress. Mechanical properties can be further improved by cold rolling and hardening processes. It offers reliable performance in the most demanding conditions of the precision electronics, defense, space and energy sectors.

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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