



## CW451K

Tin Bronze Alloy

Standardization:

**Tin Bronze / Phosphor Bronze**

### ALLOY DESCRIPTION

A hard-surfaced Tin Bronze alloy with high tin content, showing superior resistance to deformation under heavy loads.

### CHEMICAL COMPOSITION (% WEIGHT)

Fe (%)	Ni (%)	P (%)	Pb (%)	Zn (%)	Sn (%)
max 0.1	max 0.2	0.01 - 0.4	max 0.02	max 0.2	4.5 - 5.5

### MECHANICAL PROPERTIES (MIN.)

Elongation (A)	<b>55</b>
Hardness (HB)	<b>75 - 105</b>

### PHYSICAL PROPERTIES

Density	<b>8.80 [kg/dm<sup>3</sup>]</b>
Melting Temperature	<b>~830 - 990 [°C]</b>
Elk. Conductivity	<b>~6 - 8 [MS/m]</b>
Elasticity Modulus	<b>100 [kN/mm<sup>2</sup>]</b>

### CASTING / MANUFACTURING METHODS

EK	<b>Extrusion (Rod/Profile)</b>
GS	<b>sand casting</b>
GM	<b>Permanent mold casting</b>
GZ	<b>Centrifugal casting</b>

### AREAS OF APPLICATION

Worm Gears

Heavy Load Bushes

Nuts and Screws

Piston Skirts

Wear Shoes

### MACHINABILITY & CHARACTERISTICS

Perfectly withstands high surface pressures. A classic choice for heavy-working worm gears and bearing applications where the load/speed combination is demanding. Corrosion resistance and machinability are well-balanced.

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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