

Copper Alloys
CW451K (PB102) Bar & Sheet
Datasheet Updated
05 August 2021

RANGE

Product Form	Size Range
Round Bar	5/32" - 4 1/2" diameter

SPECIFICATIONS

Commercial	PB102
EN	CW451K

Most widely used grade of wrought phosphor bronze for an extensive range of general purpose applications.

CHEMICAL COMPOSITION
EN 1652:1998
CW451K

Element	% Present
Tin (Sn)	4.50 - 5.50
Iron (Fe)	0.00 - 0.10
Lead (Pb)	0.00 - 0.02
Nickel (Ni)	0.00 - 0.20
Others (Total)	0.00 - 0.20
Phosphorous (P)	0.01 - 0.40
Zinc (Zn)	0.00 - 0.20
Copper (Cu)	Balance

ALLOY DESIGNATIONS

CW451K/PB102 bronze corresponds to the following designations **but may not be a direct equivalent**:

- UNS C51000
- ISO CuSn5

SUPPLIED FORMS

- Bar
- Sheet
- Plate

APPLICATIONS

- Gears
- Connectors & switches
- Bushes & bearings
- Marine applications
- Aircraft applications
- Chemical applications
- Springs
- Architectural & decorative components

CHARACTERISTICS

- Good mechanical properties
- Excellent cold forming properties
- High wear resistance
- Very good corrosion resistance
- Easily joined by brazing and welding
- Low coefficient of friction
- Good spring properties

MECHANICAL PROPERTIES
EN 1652:1998
Sheet 0.1mm to 5.00mm

Property	Value
Proof Stress	240-670 MPa
Tensile Strength	400-720 MPa
Elongation A50 mm	2-45 %
Hardness Vickers	75 to 230 HV

DISCLAIMER

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