THAMES STOCKHOLDERS
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PB102

PHOSPHOR BRONZE ALLOY

Product Overview

Due to its suitability in a broad range of general-purpose engineering applications, **PB102** is the most common wrought phosphor bronze grade currently available in the UK.

The spring qualities of the alloy are superb due to the tin content used in the alloying process. Offering good mechanical and superior cold-forming properties, PB102 benefits from high corrosion resistance in a wide range of atmospheric conditions, coming close to the performance of aluminium bronzes. PB102 also provides good machinability.

Availability:

- Round bar, hexagonal bar

Key Features

- Good spring properties and low magnetic permeability
- High mechanical properties
- Superior corrosion resistance
- Excellent cold-forming capabilities

Applications

- Pump and valve spindles
- Shafts and springs
- Connectors, switches & electronic components
- Bushes and bearings

* Chemical Composition (weight, %)

	Cu	Sn	P	Zn	Ni	Fe	Pb	Total Impurities	
Min.	Bal	4.00	0.02						
Max.	Bal	5.50	0.40	0.30	0.30	0.10	0.02	0.50	

* Properties as per BS 2874

* Mechanical Properties

Tensile Strength	460 MPa min.
Proof Stress	380 MPa min.
Elongation A50 mm	12%

* Properties as per BS 2874 (18-40mm)

Physical Properties

Density 8.85 g/cm³
Melting Point 930 °C
Modulus of Elasticity 121 GPa
Thermal Conductivity 63 W/m.K
Electrical Resistivity 0.096 x10^{-6} Ω.m

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