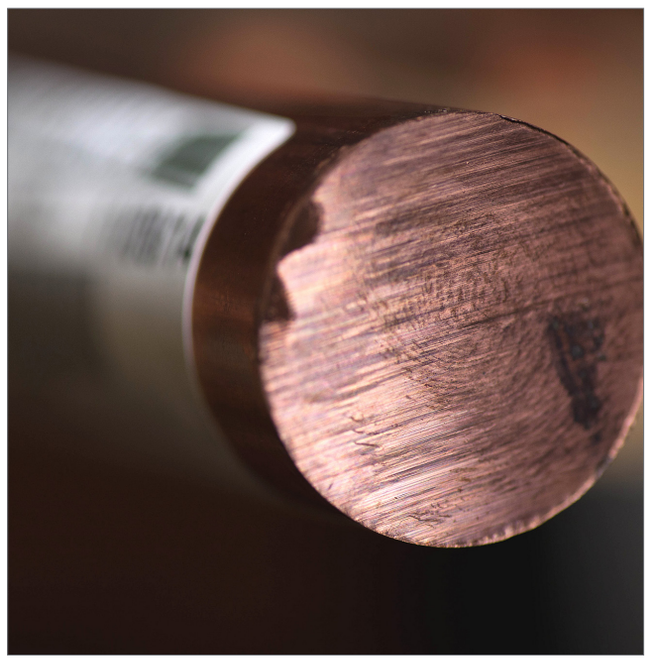
PB104 (CW453K)

Smiths Advanced Metals

Phosphor Bronze Alloy Bar

Superior fatigue & wear resistance



PB104 is a wrought phosphor bronze alloy, a hardened product containing eight percent phosphorus.

This alloy provides superior fatigue, wear and corrosion resistance. It is highly suitable for demanding offshore and marine applications. General wear resistance is excellent, as are the alloy's fatigue strength and frictional properties. The addition of tin in the alloying process gives the material excellent wear resistance.

The cold formability rating of this material is good, with superior resistance to shock loading. The product also provides superb spring qualities combined with high corrosion resistance. In a range of atmospheric conditions, PB104 compares favourably with aluminium bronzes.

Bars of grade PB104 (CW453K) are available in various sizes.

Grades / Specifications

- BS 2874
- BS B24
- DTD 265A
- EN 12163
- CuSn8
- CW453K
- PB104
- UNS C52100

Key Applications

- Heavy-duty bearings
- Engine valve guides
- Power conductors
- Shafts & spindles

Chemical Composition (weight %)

	Cu	Sn	P	Zn	Ni	Fe	Pb	Total Impurities	
min.	Bal	7.50	0.02						
max.	Bal	9.00	0.40	0.30	0.30	0.10	0.05	0.30	

As per per BS 2874

Mechanical Properties

Tensile Strength	500N/mm²
0.2% Proof Stress	360N/mm²
Elongation	18%

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

Physical Properties

Density g/cm³	8.8
Melting Point	1040°C
Thermal Conductivity	46 W/m °C
Electrical Conductivity	12% IACS
Modulus of Elasticity	105,000 N/mm2
Coefficient of thermal Expansion	17 x 10-6 per °C

Technical Sales Assistance

To find out more about the PB104 wrought phosphor bronze bars and for other technical advice, contact Smiths Advanced Metals today. Our team of qualified metallurgists and engineers will be pleased to assist further on any technical topic.

Stratton Business Park,
London Road, Biggleswade,
Bedfordshire SG18 8QB
Tel: +44 (0) 1767 604710