

Bronze Alloy

Typical Applications

- Bushes & Bearings
- Worms & Gears under high working loads
- Pump & Valve components
- Flanges
- Hydraulics
- Marine Ultrasonics
- Excavation & Cranes
- Linear Bearings

Product Description

PB1 is a continuously cast copper based alloy containing 10-12% tin. This alloy combines high mechanical strength with good ductility, corrosion resistance and wear resistance. It also offers a good resistance to shock loading but is out performed in this area by the wrought grades. PB1 can be soldered and brazed and is traditionally used in heavy load applications run at high speeds.

Weldability

PB1 is weldable / brazable.

Related material specifications

- SigmaBronze12
- BS1400 PB2
- CC481K

Key features

- High wear resistance
- Good resistance to impact loading
- High fatigue strength
- Excellent corrosion resistance in seawater
- High mechanical strength
- Good resistance to brine

Availability

Round bar, hollow bar, flat bar, plate.

Cut to size capability

There are thirty power saws within the Smiths group including a fully automated magazine feed CNC rod blanking line. We can economically cut from one off blanks to the largest production run for immediate or just in time deliveries.

Corrosion Resistance

High Corrosion resistance in seawater and other chloride containing environments.

Machinability

Good / fair.

Chemical Composition (weight %)

	Cu	Sn	Zn	Ni	Pb	P	Al	Fe		
min	Rem	10.00				0.50				
max	Rem	12.00	0.05	0.10	0.25	1.20	0.005	0.10		

Mechanical Properties

Casting	0.2% Proof Stress MPa	Tensile Strength MPa	Elongation %	Hardness HB
Continuous	170 min	360 min	6 min	100 min
Centrifugal	170 min	330 min	4 min	95 min

Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

UK Service Centres:

Smiths Belfast **02895 908 897**
 Smiths Biggleswade **01767 604 704**
 Smiths Birmingham **0121 728 4940**
 Smiths Bristol **0117 971 2800**
 Smiths Chelmsford **01245 466 664**
 Smiths Gateshead **0191 469 5428**
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Quality & Testing:



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