

## Features

- Offers very good resistance to corrosion in various atmospheric conditions, including marine and chemical environments.
- The 5% tin content in the alloy contributes to superb spring properties, making it ideal for components requiring elasticity.
- It possesses high standard mechanical properties and high fatigue resistance, suitable for demanding applications.
- The material can be extensively cold worked and formed into various shapes.
- Excellent Joining Properties: It has excellent soldering, brazing, and butt-welding capabilities.
- Low Coefficient of Friction & High Wear Resistance: These properties make it suitable for applications involving movement and friction, such as bearings and gears.

## RS PRO Phosphor Bronze (PB102) Round Bar

**L:1000MM X DIA: 0.1/2IN**

RS Stock No: 0764177



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## Product Description

### *RS PRO Phosphor Bronze (PB102) Round Bar*

*The RS PRO Phosphor Bronze (PB102) Round Bar is a durable, corrosion-resistant rod suitable for various engineering applications like bearings, gears, and springs.*

#### **Key Features:**

- **Low Magnetic Permeability:** *This feature makes it useful for certain electrical and instrumentation components.*
- **Machinability (Poor/Fair):** *While rated as poor compared to free-machining brass (around 20-25%), it offers reasonable machinability for a phosphor bronze alloy.*
- **Corrosion Resistance:** *Superior, almost equivalent to aluminum bronzes in many atmospheric conditions.*

#### **Applications:**

- *Bushes and bearings (especially those with heavy loads).*
- *Gears and worm gears.*
- *Springs and spring washers.*
- *Pump and valve components.*
- *Fasteners, connectors, switches, and electrical components.*
- *Marine and chemical hardware*

## General Specifications

<b>Material</b>	PB102
<b>Form</b>	Round Bar
<b>Length</b>	1000MM
<b>Rod Diameter</b>	0.1/2IN
<b>Tensile Strength</b>	420 N/mm <sup>2</sup>
<b>Hardness</b>	120 HB (Brinell Hardness)

## Mechanical Properties

Density	8.85 g/cm <sup>3</sup>
Melting Point	930 °C
Modulus of Elasticity	121 GPa
Thermal Conductivity	63 W/m.K
Electrical Resistivity	0.096 x10 <sup>-6</sup> Ω.m

## Similar Products

RS Code	Rod Diameter	Length
0764171	1.1/2IN	1000MM
0764172	1IN	1000MM
0764173	1.3/4IN	1000MM
0764174	0.5/8IN	1000MM
0764175	0.3/4IN	1000MM
0764176	1.1/4IN	1000MM
0764178	2IN	1000MM
0764179	0.7/8IN	1000MM