



Tel : (0044) (0)1384 868080 Fax : (0044) (0)1384 482088

Email : sales@ppnonferrous.co.uk

This corrosion resistant, high strength Phosphor Bronze is a much favoured material for engineering components subject to friction.

It is also ideal as a contact material for fasteners & masonry fixings.

In its strip form it has been used as one of the main non ferrous spring, contact and connector pin materials.

PB102 is mainly available in the following forms.

Round bar, Hexagon, Sheet, Strip in Coil, Cut Plate.

Bar from 1/8" to 4" diameter

Hexagon from 1/2" a/f to 2.22" a/f

Sheet from 1.2mm to 6mm thick

Plate from 3/8" to 3" thick.

Strip in Coil.

Thickness from 0.15mm to 6.30mm



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Chemical & Physical Properties.

Typical Chemical Composition.

Cu. 95% Sn. 5% P. 0.02 - 0.04

Typical Mechanical Properties.

Sheet & Strip

| 0.1% Proof Stress (n/mm ²) | Tensile Strength (n/mm ²) | Elongation (%) | | Hardness (HV) |
|--|---|-------------------|---------|------------------|
| (a) (h) | (a) (h) | (a) (h) | (a) (h) | |
| 120 510 | 340 630 | 60 | 8 80 | 190 |

Plate

| 0.1% Proof Stress (n/mm ²) | Tensile Strength (n/mm ²) | Elongation (%) | | Hardness (HV) |
|--|---|-------------------|---------|------------------|
| (a) (h) | (a) (h) | (a) (h) | (a) (h) | |
| 110 260 | 320 420 | 55 40 | 80 | 130 |

Bar:

| 0.1% Proof Stress (n/mm ²) | Tensile Strength (n/mm ²) | Elongation (%) | | Hardness (HV) |
|--|---|-------------------|---------|------------------|
| (a) (h) | (a) (h) | (a) (h) | (a) (h) | |
| 120 140 | 340 540 | 55 | 20 80 | 170 |



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Tolerances

Dimensional tolerances for bars to BS2874 1986

Round bars

| <u>Size</u> | Close Tolerance | Normal tolerance |
|-------------|-----------------|------------------|
| 3 - 6mm | - 0.12mm | +/- 0.15mm |
| 6 - 10mm | - 0.15mm | +/- 0.18mm |
| 10 - 18mm | - 0.18mm | +/- 0.22mm |
| 18 - 30mm | - 0.21mm | +/- 0.26mm |
| 30 - 50mm | - 0.39mm | +/- 0.32mm |
| 50 - 80mm | - 0.37mm | +/- 0.7mm |
| 80mm plus | | +/- .29% |

Hexagon + Square Bars

| <u>Size</u> | Hexagon | Square |
|-------------|---------|------------|
| 3 - 6mm | | +/- 0.15mm |
| 6 - 10mm | -0.22mm | +/- 0.18mm |
| 10- 18mm | -0.27mm | +/- 0.22mm |
| 18- 30mm | -0.33mm | +/- 0.26mm |
| 30- 50mm | -0.39mm | +/- 0.32mm |
| 50- 80mm | -0.74mm | +/- 0.60mm |

Cut Plate

Normal cutting tolerances are +/- 1mm

The information given above is based on our current knowledge and is given in good faith; however the company will accept no liability in respect of any third party reliance thereon.