

C52400 Phosphorus Bronze

C52400 is a Phosphor Bronze Alloy which has Good to excellent corrosion resistance, Good cold workability for blanking, forming and bending and shearing.

TYPICAL APPLICATIONS:

Typical applications include Welding rods, Fasteners, Cotter - Pins, lock washers, Architecture Bridge bearing plates, Industrial Heavy Bars and Plates, Fittings and Expansion Plates for Bridges.



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Equivalent Specifications:

Specifications	BS	EN	JIS	DIN	IS	ISO	Russian
Designation	PB1	-	-	2.105	-	427- CuSn10	-

Chemical Composition:

	Cu	Pb	Sn	Zn	Fe	P
Min	-	-	9	-	-	0.03
Max	Rem.	0.05	11	0.2	0.1	0.35

Specifications:

Product	Specification
Bar	ASTM B103 / ASTM B139/B139M
Plate	ASTM B103
Rod	ASTM B139/B139M / AWS A5.13 / SAE J461 / SAE J463
Shapes	ASTM B139/B139M
Sheet	ASTM B103
Strip	ASTM B103 / SAE J461 / SAE J463

Fabrication Properties:

Joining Technique	Suitability
Soldering	Excellent
Brazing	Excellent
Oxyacetylene Welding	Fair
Gas Shielded Arc Welding	Good
Coated Metal Arc Welding	Fair
Spot Weld	Good
Seam Weld	Fair
Butt Weld	Excellent
Capacity for Being Cold Worked	Good
Capacity for Being Hot Formed	Poor
Machinability Rating	20

Physical Properties:

Melting Point - Liquidus	1830 °F
Melting Point - Solidus	1550 °F
Density	0.317 lb/cu in. at 68°F
Specific Gravity	8.78
Electrical Conductivity	11 % IACS at 68°F
Thermal Conductivity	29 Btu/ sq ft/ ft hr/ °F at 68°F
Coefficient of Thermal Expansion 68-572	$10.2 \cdot 10^{-6}$ per °F (68 – 572°F)
Specific Heat Capacity	0.09 Btu/ lb /°F at 68°F
Modulus of Elasticity in Tension	16000 ksi
Modulus of Rigidity	6000 ksi

Sizes Available:

TUBES	6.35 mm to 110mm
ROUND WIRES	1 mm to 11mm
ROUND RODS	1.2 to 250 mm
HEX RODS	Min. 5 mm to Max. 60 mm
SQUARE RODS	Min. 4 mm to Max. 60 mm
FLATS	Min. 4 mm thickness and max width of 120mm
PROFILES	As per customer drawings
HOLLOW RODS	Min Bore Size 20mm and Max OD 130mm