CZ124

FREE MACHINING BRASS

DESCRIPTION

CZ124 Free machining brass, produced from a combination of copper and zinc, has the highest machinability of all copper alloys, and is the standard against which all the others are compared to. CZ124 Brass, known for its strength and resistance to corrosion with properties closely resembling that of steel, is one of the most popular copper alloys used today. CZ124 Brass can be precision machined easily. Although ductile in its softened state, CZ124 Brass is a strong material to work with and maintains its strength even under some of the most demanding conditions. CZ124 Brass forms a thin protective "patina", which, unlike steel and iron, will not rust when exposed to the atmosphere. As a high-density material, CZ124 Brass is ideal for heavy industrial parts. CZ124 Brass is also valued for its high polished finish. CZ124 Brass is available in Rounds, Flats, Squares, Hexagons, Shapes and Hollows.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	60.00	63.00
Pb	2.50	3.70
Fe	-	0.30
Total Others Excl Fe	-	0.50
Zn	Remainder	

MECHANICAL PROPERTIES ACCORDING TO BS2874 (AS PER TEMPER M)

Range (mm)	From	To	UTS Min (N/mm^2)	PS Min (N/mm^2)	Elongation Min (%)	Hardness Min	Hardness Max
Round (Dia)	1.5	25.00	330.00	130.00	12.00	-	-
	25.00	50.00	300.00	115.00	18.00	-	-
	50.00	75.00	280.00	95.00	22.00	-	-
Hex (A/F)	3.00	25.00	330.00	130.00	12.00	-	-
	25.00	50.00	300.00	115.00	18.00	-	-
	50.00	70.00	280.00	95.00	22.00	-	-
Square (A/F)	3.00	12.00	300.00	115.00	18.00	-	-
	12.00	25.00	310.00	105.00	12.00	-	-
	50.00	75.00	280.00	95.00	22.00	-	-
Rectangle (Thickness)	3.00	25.00	300.00	115.00	18.00	-	-
	25.00	50.00	280.00	95.00	22.00	-	-

RAJHANS METALS PRIVATE LIMITED

3985, GIDC, Phase-III, Dared, Jamnagar - 361 004. (Gujarat) INDIA. +91 2882573820 www.rajhans.com

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FREE MACHINING BRASS

PHYSICAL PROPERTIES

Melting Point - Liquidus°F	1650
Melting Point - Solidus°F	1630
Densitylb/cu in. at 68°F	0.307
Specific Gravity	8.5
Electrical Conductivity% IACS at 68°F	26
Thermal ConductivityBtu/ sq ft/ ft hr/ °F at 68°F	67
Coefficient of Thermal Expansion 68-57210-^{6} per °F (68 – 572°F)	11.4
Specific Heat CapacityBtu/ lb /°F at 68°F	0.09
Modulus of Elasticity in Tensionksi	14000
Modulus of Rigidityksi	5300

FABRICATION PROPERTIES

Technique	Suitability
Soldering	Excellent
Brazing	Good
Oxyacetylene Welding	Not Recommended
Gas Shielded Arc Welding	Not Recommended
Coated Metal Arc Welding	Not Recommended
Spot Weld	Not Recommended
Seam Weld	Not Recommended
Butt Weld	Fair
Capacity for Being Cold Worked	Fair
Capacity for Being Hot Formed	Fair
Machinability Rating	100

TYPICAL USES

- Automotive
- Builders Hardware
- Consumer
- Fasteners
- Industrial
- Plumbing

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