

C22000

NON LEADED BRONZE

DESCRIPTION

C22000 Commercial bronze has excellent corrosion resistance. Excellent cold workability, good hot workability for blanking, coining, drawing, piercing and punching, shearing, spinning, squeezing and swaging, stamping heading and upsetting, roll threading and knurling, hot forging and pressing.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	89.00	91.00
Cu	-	0.05
Fe	-	0.05
Total Others	-	0.20
Zn	Remainder	

MECHANICAL PROPERTIES (AS PER TEMPER Ho2)

Range (mm)	From	To	UTS Min (N/mm ²)	PS Min (N/mm ²)	Elo Min (%)	Hardness Min	Hardness Max
Round (Dia)	6	12	345	205	7	-	-
	12	25	310	185	10	-	-
	25	75	275	170	12	-	-
Hex (A/F)	6	12	345	205	7	-	-
	12	25	310	185	10	-	-
	25	70	275	170	12	-	-
Octagon (A/F)	6	12	345	205	7	-	-
	12	25	310	185	10	-	-
	25	50	275	170	12	-	-

PHYSICAL PROPERTIES

Melting Point - Liquidus°F	1910
Melting Point - Solidus°F	1870
Density lb/cu in. at 68°F	0.318
Specific Gravity	8.8
Electrical Conductivity ¹ * IACS at 68°F	44
Thermal Conductivity Btu/ sq ft/ ft hr/ °F at 68°F	109
Coefficient of Thermal Expansion 68-572 ¹⁰ 6 per °F (68 - 572°F)	10.2
Specific Heat Capacity Btu/ lb /°F at 68°F	0.09
Modulus of Elasticity in Tension ksi	17000
Modulus of Rigidity ksi	6400

FABRICATION PROPERTIES

Soldering	Excellent
Brazing	Excellent
Oxyacetylene Welding	Good
Gas Shielded Arc Welding	Good
Coated Metal Arc Welding	Not Recommended
Spot Weld	Not Recommended
Seam Weld	Not Recommended
Butt Weld	Good
Capacity for Being Cold Worked	Excellent
Capacity for Being Hot Formed	Good
Machinability Rating	20

TYPICAL USES

- › Architecture
- › Builders Hardware
- › Consumer
- › Electrical
- › Fasteners
- › Industrial
- › Marine
- › Ordnance
- › Plumbing