

DESCRIPTION

320 HT1 possesses good torsional properties and general corrosion resistance. Manganese bronze withstands exposure to dry gases, dilute alkalis, sulfides, most organic solvents and acids. Though 320 HT 1 has common resistance, contact with ammonia, mercury and most chlorine gas should be avoided.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	86.00	89.00
Pb	-	0.05
Fe	-	0.05
Total others	-	0.20
Zn	Remainder	

MECHANICAL PROPERTIES ACCORDING TO ASTM B134 (AS PER TEMPER Ho2)

Range (mm)	From	To	UTS Min (Mpa)	PS Min (Mpa)	Elo Min (%)	Hardness Min	Hardness Max
Round (Dia)	1.5	6	455	530	-	-	-
Round (Dia)	3	6	455	530	-	-	-
Square (A/F)	3	6	455	530	-	-	-



PHYSICAL PROPERTIES

Melting Point - Liquidus°F	1895
Melting Point - Solidus°F	1840
Density lb/cu in. at 68°F	0.317
Specific Gravity	8.78
Electrical Conductivity1* IACS at 68°F	40
Thermal Conductivity Btu/ sq ft/ ft hr/ °F at 68°F	100
Coefficient of Thermal Expansion 68-57210-6 per °F (68 - 572°F)	10.3
Specific Heat Capacity Btu/ lb /°F at 68°F	0.09
Modulus of Elasticity in Tension ksi Modulus of Elasticity in T	17000
Modulus of Rigidity ksi	6400

FABRICATION PROPERTIES

Technique	Suitability
Soldering	Excellent
Brazing	Excellent
Oxyacetylene Welding	Good
Gas Shielded Arc Welding	Good
Coated Metal Arc Welding	Not Recommended
Spot Weld	Fair
Seam Weld	Not Recommended
Butt Weld	Good
Capacity for Being Cold Worked	Excellent
Capacity for Being Hot Formed	Good
Machinability Rating	30

TYPICAL USES

- > Architecture
- > Consumer
- > Electrical
- > Fasteners

