

# C23000

## LEAD FREE BRASS

### DESCRIPTION

C23000 brass is the most durable of all metals for commercial water pipe in the practical price range. Excellent for its resistance to dezincification and season cracking for which the high copper brasses are known. Moderate strength and good retention of spring properties. Specified for underground service lines since it offers greatest corrosion resistance to all types of potable waters. Popular as an outdoor metal and has found for itself a very important place in modern architecture. Also known as Nordic Brass.

### CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	84.00	86.00
Pb	-	0.05
Fe	-	0.05
Total Others	-	0.20
Zn	Remainder	

### MECHANICAL PROPERTIES ACCORDING TO ASTM B134 (AS PER TEMPER H02)

Range (Inch)	From	To	UTS Min (Mpa)	UTS Max (Mpa)	PS Min	Elongation Min (%)	Hardness Min	Hardness Max
Round (Dia)	1.5	6.00	455.00	530.00	-	-	-	-
Hex (A/F)	3.00	6.00	455.00	530.00	-	-	-	-
Square (A/F)	3.00	6.00	455.00	530.00	-	-	-	-



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### PHYSICAL PROPERTIES

Melting Point - Liquidus°F	1880
Melting Point - Solidus°F	1810
Density/lb/cu in. at 68°F	0.316
Specific Gravity	8.75
Electrical Conductivity% IACS at 68°F	37
Thermal ConductivityBtu/ sq ft/ ft hr/ °F at 68°F	92
Coefficient of Thermal Expansion 68-57210 <sup>6</sup> per °F (68 – 572°F)	10.4
Specific Heat Capacity Btu/ lb /°F at 68°F	0.09
Modulus of Elasticity in Tensionksi	17000
Modulus of Rigidity ksi	6400

### FABRICATION PROPERTIES

Technique	Suitability
Soldering	Excellent
Brazing	Excellent
Capacity for being hot worked	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
- > Builders Hardware
- > Consumer
- > Electrical
- > Fasteners
- > Industrial
- > Plumbing

