

C24000

LEAD FREE BRASS

DESCRIPTION

C24000 is known as Low Brass (80% brass), a copper-zinc alloy with about 80% copper and 20% zinc. It is valued for its golden colour, good strength, corrosion resistance, and excellent formability, making it popular in decorative, architectural, and industrial applications.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	78.50	81.50
Fe	0.00	0.05
Pb	0.00	0.05
Zn	Remainder	

MECHANICAL PROPERTIES ACCORDING TO ASTM B927 C24000 (AS PER TEMPER HO2)

Range (Inch)	From	To	UTS Min (Ksi)	PS Min (Ksi)	Elongation Min (%)	Hardness Min (HRB)	Hardness Max (HRB)
Round (Dia)	0.25	0.50	53	33.00	10.00	-	-
	0.50	1.00	48	30.00	13.00	-	-
	1.00	2.00	43	28.00	15.00	-	-
Hex (A/F)	0.25	0.50	53	33.00	10.00	-	-
	0.50	1.00	48	30.00	13.00	-	-
	1.00	2.00	43	28.00	15.00	-	-
Octagon (A/F)	0.25	0.50	53	33.00	10.00	-	-
	0.50	1.00	48	30.00	13.00	-	-
	1.00	2.00	43	28.00	15.00	-	-

Range (MM)	From	To	UTS Min (Mpa)	PS Min (Mpa)	Elongation Min (%)	Hardness Min (HRB)	Hardness Max (HRB)
Round (Dia)	1.5	12	365	230	10.00	-	-
	12	25	330	205	13.00	-	-
	25	50	295	195	15.00	-	-
Hex (A/F)	6	12	365	230	10.00	-	-
	12	25	330	205	13.00	-	-
	25	50	295	195	15.00	-	-
Octagon (A/F)	6	12	365	230	10.00	-	-
	12	25	330	205	13.00	-	-
	25	50	295	195	15.00	-	-

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PHYSICAL PROPERTIES

Density	~0.307 lb/cu in (8.5 g/cm ³)
Melting Range	~1830–1900 °F (999–1038 °C)
Electrical Conductivity	~28% IACS
Thermal Conductivity	~71 Btu/sq. ft/ft hr/°F
Coefficient of Thermal Expansion	~11.6 × 10 ⁻⁶ per °F (68–572 °F)

FABRICATION PROPERTIES

Technique	Suitability
Formability	Excellent
Machinability	30% (where C36000 free cutting brass is 100%)
Soldering	Excellent
Brazing	Excellent
Welding	Fair

TYPICAL USES

Architecture: Medallions, ornamental components, spandrels.

Consumer Goods: Clock dials, musical instrument parts, plaques.

Electrical: Battery caps, rotor bars in AC motors.

Industrial: Flexible hose, bellows, pump lines, welding wire.