

C27200

LEAD FREE BRASS

DESCRIPTION

UNS C27200 yellow brass has a copper content of not less than 62%, CuZn37 is the major brass alloy for the cold forming process. Even though brasses with lower Zinc content have better cold forming properties, CuZn37 is the most used alloy. Reasons for this are on the one hand economical due to lower price of Zinc compared to copper on the other hand the forming properties of this alloy meet the demand of many applications.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	62.00	68.50
Pb	-	0.10
Fe	-	0.70
Total Others	-	0.30
Zn	Remainder	

MECHANICAL PROPERTIES (AS PER TEMPER HO2)

Range (Inch)	From	To	UTS Min (ksi)	UTS Max (ksi)	PS Min (ksi)	Elongation Min (%)	Hardness Min (HRB)	Hardness Max (HRB)
Round (Dia)	0.059	2.953	56.00	66.00	-	-	60.00	76.00
Hex (A/F)	0.118	2.756	56.00	66.00	-	-	60.00	76.00
Square (A/F)	0.118	2.362	56.00	66.00	-	-	60.00	76.00

MECHANICAL PROPERTIES (AS PER TEMPER HO2)

Range (mm)	From	To	UTS Min (Mpa)	UTS Max (Mpa)	PS Min (Mpa)	Elongation Min (%)	Hardness Min (HRB)	Hardness Max (HRB)
Round (Dia)	1.5	75.00	385.00	455.00	-	-	60.00	76.00
Hex (A/F)	3.00	70.00	385.00	455.00	-	-	60.00	76.00
Square (A/F)	3.00	60.00	385.00	455.00	-	-	60.00	76.00

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PHYSICAL PROPERTIES

Melting Point - Liquidus°F	1680
Densitylb/cu in. at 68°F	0.305
Specific Gravity	8.44
Electrical Conductivity% IACS at 68°F	27.6
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
Modulus of Elasticity in Tensionksi	0.09
Modulus of Elasticity in Tensionksi	15000
Modulus of Rigidityksi	5600

FABRICATION PROPERTIES

No fabrication properties for this alloy.

COMMON FABRICATION PROCESSES

- Drawing
- Forming and Bending
- Shearing
- Spinning
- Swaging

TYPICAL USES

- Fasteners
- Industrial
- Marine
- Plumbing