IS 4413

LEAD FREE BRASS

DESCRIPTION

IS 4413 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	65.00
Pb	-	0.30
Fe	-	0.10
Total Others	-	0.60
Zn	Remainder	

MECHANICAL PROPERTIES (AS PER TEMPER HB)

Range (mm)	From	To	UTS Min (Mpa)	UTS Max (Mpa)	PS Min (Mpa)	Elongation Min (%)	Hardness Min	Hardness Max
Round (Dia)	1.5	6	460	620	-	-	-	-
Hex (A/F)	3	6	460	620	-	-	-	-
Square (A/F)	3	6	460	620	-	-	-	-
Rectangle (Thickness)	3	6	460	620	-	-	-	-

RAJHANS METALS PRIVATE LIMITED

3985, GIDC, Phase-III, Dared, Jamnagar - 361 004. (Gujarat) INDIA. +91 2882573820 www.rajhans.com

CW507L

LEAD FREE BRASS

PHYSICAL PROPERTIES

Melting Point - Liquidus°F	1750
Density lb/cu in. at 68°F	1680
Specific Gravity	0.308
Electrical Conductivity % IACS at 68°F	8.53
Thermal Conductivity Btu/ sq ft/ ft hr/ °F at 68°F	28
Coefficient of Thermal Expansion 68-57210"6 per °F (68 - 572°F)	11.1
Specific Heat Capacity Btu/ lb /°F at 68°F	0.09
Modulus of Elasticity in Tension ksi	16000
Modulus of Rigidity ksi	6000

FABRICATION PROPERTIES

Technique	Suitability
Soldering	Excellent
Brazing	Excellent
Oxyacetylene Welding	Good
Gas Shielded Arc Welding	Fair
Coated Metal Arc Welding	Not Recommended
Spot Weld	Good
Seam Weld	Not Recommended
Butt Weld	Good
Capacity for Being Cold Worked	Excellent
Capacity for Being Hot Formed	Fair
Machinability Rating	35

TYPICAL USES

- Fasteners
- Industrial

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