CW612N

FORGING BRASS

DESCRIPTION

Brass is an alloy mainly consisting of copper and zinc. Brass alloys can be easily shaped and are available in various colors. Brass has high thermal conductivity. CW612N forging brass alloys have good forgeability. They are available in the form of rod.
The following datasheet gives details about CW612N brass alloys.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	59.00	60.00
Pb	1.60	2.50
Sn	-	0.30
Fe	-	0.30
Al	-	0.05
Ni	-	0.30
Total Others	-	0.20
Zn	Remainder	

MECHANICAL PROPERTIES ACCORDING TO EN12164 (AS PER TEMPER R410)

Range (Inch)	From	To	UTS Min (N/mm^2)	PS Min (N/mm^2)	Elongation Min (%)	Hardness Min	Hardness Max
Round (Dia)	2.00	40.00	410.00	230.00	12.00	-	-
Hex (A/F)	2.00	35.00	410.00	230.00	12.00	-	-
Square (A/F)	2.00	35.00	410.00	230.00	12.00	-	-

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PHYSICAL PROPERTIES

Melting Point - Liquidus°F	1640
Melting Point - Solidus°F	1620
Densitylb/cu in. at 68°F	0.305
Specific Gravity	8.44
Electrical Conductivity% IACS at 68°F	27
Thermal ConductivityBtu/ sq ft/ ft hr/ °F at 68°F	69
Coefficient of Thermal Expansion 68-57210^{-6} per °F (68 – 572°F)	11.5
Specific Heat CapacityBtu/ lb /°F at 68°F	0.09
Modulus of Elasticity in Tensionksi	15000
Modulus of Rigidityksi	5600

FABRICATION PROPERTIES

Technique	Suitability
Soldering	Excellent
Brazing	Good
Oxyacetylene Welding	Not Recommended
Gas Shielded Arc Welding	Not Recommended
Coated Metal Arc Welding	Not Recommended
Spot Weld	Not Recommended
Seam Weld	Not Recommended
Butt Weld	Fair
Capacity for Being Cold Worked	Poor
Capacity for Being Hot Formed	Excellent
Forgeability Rating	100
Machinability Rating	80

TYPICAL USES

- Builders Hardware
- Building
- Consumer
- Electrical
- Industrial

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