

CW712R

NAVAL BRASS

DESCRIPTION

CW712R naval brass. Mostly used for machine hardware, screw machine products and valve stems, CW712R naval brass is great for hot forging and pressing and machining. With high ductility, naval brass has excellent electrical and thermal conductivity. CW712R naval brass has good creep resistance and high impact strength.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	61.00	63.00
Pb	0.20	0.60
Sn	1.00	1.50
Fe	0.00	0.10
Ni	0.00	0.20
Total Others	-	0.20
Zn	Remainder	

MECHANICAL PROPERTIES (AS PER TEMPER H080)

Range (mm)	From	To	UTS Min	PS Min	Elongation Min (%)	Hardness Min (HRB)	Hardness Max (HRB)
Round (Dia)	8.00	75.00	-	-	-	80.00	140.00
Hex (A/F)	8.00	65.00	-	-	-	80.00	140.00
Square (A/F)	8.00	60.00	-	-	-	80.00	140.00

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PHYSICAL PROPERTIES

Melting Point - Liquidus°F	1650
Melting Point - Solidus°F	1630
Densitylb/cu in. at 68°F	0.305
Specific Gravity	8.44
Electrical Conductivity% IACS at 68°F	26
Thermal ConductivityBtu/ sq ft/ ft hr/ °F at 68°F	67
Coefficient of Thermal Expansion 68-57210 ⁻⁶ per °F (68 – 572°F)	11.8
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	Good
Forgeability Rating	90
Machinability Rating	50

COMMON FABRICATION PROCESSES TYPICAL USES

- › Hot forging and Pressing
- › Machining

- › Fasteners
- › Industrial
- › Marine