CZ133

NAVAL BRASS

DESCRIPTION

CZ133 is commonly referred to as a naval brass and issued typically in a wide range of marine and subsea Applications. This brass alloy offers superior strength and corrosion resistance and offers good property retention at cryogenic temperatures. With excellent hot formability and very good corrosion resistance.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	59.00	62.00
Pb	-	0.20
Sn	0.50	1.00
Fe	-	0.10
Total Others	-	0.40
Zn	Remainder	

MECHANICAL PROPERTIES ACCORDING TO BS2874 (AS PER TEMPER M)

Range (Inch)	From	To	UTS Min (N/mm²)	PS Min (N/mm²)	Elongation Min (%)	Hardness Min	Hardness Max
Round (Dia)	6.00	18.00	400.00	170.00	20.00	-	-
	18.00	40.00	350.00	150.00	25.00	-	-
Hex (A/F)	6.00	18.00	400.00	170.00	20.00	-	-
	18.00	40.00	350.00	150.00	25.00	-	-
Square (A/F)	6.00	18.00	400.00	170.00	20.00	-	-
	18.00	40.00	350.00	150.00	25.00	-	-
Rectangle (Thickness)	6.00	18.00	400.00	170.00	20.00	-	-
	18.00	40.00	350.00	150.00	25.00	-	-

3985, GIDC, Phase-III, Dared, Jamnagar - 361 004. (Gujarat) INDIA. +91 288 2573820 www.rajhans.com

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PHYSICAL PROPERTIES

Melting Point - Liquidus°F	1650
Melting Point - Solidus°F	1630
Densitylb/cu in. at 68°F	0.304
Specific Gravity	8.41
Electrical Conductivity% IACS at 68°F	26
Thermal ConductivityBtu/ sq ft/ ft hr/ °F at 68°F	67
Coefficient of Thermal Expansion 68-572$10^{-6}$ 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
Capacity for being Cold Worked	Fair
Hot Worked	Excellent
Machinability Rating	30%
Forgeability Rating	90%
Silver Alloy Brazing	Excellent
Soft Soldering	Excellent
Oxyacetylene Welding	Good

TYPICAL USES

- Fasteners
- Industrial
- Marine

RAJHANS METALS PRIVATE LIMITED

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