BRASS

CZ112 - CW712R

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CZ112, also known as CW712R, is a type of naval brass renowned for its use in marine and subsea applications. It can be easily fabricated and offers good machinability and excellent resistance to various corrosive environments. This brass alloy's superior strength and corrosion resistance, along with its good property retention at cryogenic temperatures, make it a versatile material for demanding applications.

KEY FEATURES

- Excellent resistance to corrosion
- Can be easily formed when hot,
- Good mechanical properties
- High strength
- Good soldering and brazing properties

CHEMICAL PROPERTIES

Copper (Cu)	Tin (Sn)	Lead (Pb)	Nickel (Ni)	Iron (Fe)	Other Elements	Zinc (Zn)
61-63%	**1%**	**0.5-1%**	**0.3%**	**0.1%**	**0.2%**	**rest**

MECHANICAL PROPERTIES

Tensile strength (N/mm²)	**450-700**
Yield strength (N/mm²)	**150-250**
Elongation (% at break)	**20-45**
Hardness - Brinell (HB) tube	**90-150**
Hardness - Vickers (HV)	**130-160**

PHYSICAL PROPERTIES

Density (kg/m³)		**8470**
Modulus of elasticity (Gpa)		**100-110**
Mean coefficient of thermal expansion	0-100ºC (µm/m/ºC)	**20.0**
	0-350ºC (µm/m/ºC)	**22.2**
	0-538ºC (µm/m/ºC)	**23.1**
Thermal conductivity	at 100ºC (W/m.K)	**90**
	at 500ºC (W/m.K)	**102**
Specific Heat 0-100ºC (J/kg.K)		**377**
Electrical conductivity (IACS %)		**28**
Melting point (ºC)		**900**

MARKET SECTORS

Marine Equipment
Valves, pump components, propeller shafts, bearings

Automotive Industry
Bearings, bushes, connectors, fittings, components

Construction & Architecture
Railings, balustrades, door frames, window frames

Electrical Industry
Connectors, terminals, switch gear components, contacts

Engineering Components
Bearings, bushes, gears, valves, pump components

Aerospace Industry
Bearings, bushes, connectors, fittings, components

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