

BRASS

CZ114 - CW721R



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CZ114, also known as CW721R or high tensile brass, is a robust brass alloy developed for applications requiring high strength and corrosion resistance. CZ114 is a duplex or alpha/beta brass alloy, sometimes referred to as manganese bronze due to its composition and properties. This brass alloy's combination of high strength, excellent formability, and corrosion resistance makes it a versatile material for a wide range of applications.

KEY FEATURES

- Enhanced Strength Levels
- Excellent Hot Forming Properties
- Good Corrosion Resistance
- High Machinability Rating
- Non-Sparking

CHEMICAL PROPERTIES

Copper (Cu)	Lead (Pb)	Tin (Sn)	Nickel (Ni)	Iron (Fe)	Aluminium (Al)	Zinc (Zn)
59-61%	1.2-1.6%	0.3-0.6%	0.3%	0.25-0.5%	0.1-0.3%	rest

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	400-600
Yield strength (N/mm ²)	150-200
Elongation (% at break)	20-35
Hardness - Brinell (HB) tube	100-150
Hardness - Vickers (HV)	130-170

PHYSICAL PROPERTIES

Density (kg/m ³)	8470	
Modulus of elasticity (Gpa)	100-115	
Mean coefficient of thermal expansion	0-100°C (µm/m/°C)	20.2
	0-350°C (µm/m/°C)	22.6
	0-538°C (µm/m/°C)	24.1
Thermal conductivity	at 100°C (W/m.K)	115
	at 500°C (W/m.K)	95
Specific Heat 0-100°C (J/kg.K)	380	
Electrical conductivity (IACS %)	28	
Melting point (°C)	900	

MARKET SECTORS



Propeller shafts, marine fittings, valves, pumps



Bearings, bushes, connectors, fittings, components



Door handles, window frames, railings



Connectors, terminals, switch gear components, contacts



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