

BRASS

CZ106 - CW505L

BORNMORE METALS



CZ106 - CW505L

CZ106, also known as CW505L, is a type of brass alloy commonly referred to as cartridge brass. It's an alpha brass containing less than 37% zinc, which makes it a ductile material that can be cold worked. It's chosen for its combination of strength and ductility, excellent deep drawing characteristics, and CZ106 is also noted for its resistance to de-zincification, making it ideal for use in warm, acidic waters.

KEY FEATURES

- Excellent cold workability
- Can be hot formed and hot forged
- Good corrosion resistance
- High ductility
- Excellent soldering and brazing properties

CHEMICAL PROPERTIES

Copper (Cu)	Nickel (Ni)	Tin (Sn)	Lead (Pb)	Aluminium (Al)	Other Elements	Zinc (Zn)
63-69%	0.3%	0.1%	0.05%	0.02%	0.1%	rest

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	330-520
Yield strength (N/mm ²)	110-450
Elongation (% at break)	30-50
Hardness - Brinell (HB) tube	70-115
Hardness - Vickers (HV)	70-140

PHYSICAL PROPERTIES

Density (kg/m ³)	8470	
Modulus of elasticity (Gpa)	100	
Mean coefficient of thermal expansion	0-100°C (µm/m/°C)	21.0
	0-350°C (µm/m/°C)	22.2
	0-538°C (µm/m/°C)	23.1
Thermal conductivity	at 100°C (W/m.K)	118
	at 500°C (W/m.K)	102
Specific Heat 0-100°C (J/kg.K)	377	
Electrical conductivity (IACS %)	28	
Melting point (°C)	935	

MARKET SECTORS



Heating & Plumbing

Tubes, pipes, gas lines, fittings, valves, connectors



Electrical Industry

Electrical connectors, terminals, components in switches, relays



Manufacturing & Engineering

Screws, nuts, bolts, fasteners, machinery components



Automotive Industry

Radiators, heat sinks, fuel lines, connectors



Marine Equipment

Components, fittings, valves, pumps, tanks



Chemical Processing

Heat exchangers, condensers, components