

ALUMINIUM BRONZE

CA104 - CW307G



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Aluminum Bronze CA104 is a high-strength copper-based alloy widely used in various industries due to its exceptional combination of mechanical and physical properties. It is an excellent material for manufacturing parts that require high strength, wear resistance and good machinability. The combination of aluminium, nickel and iron enhances its mechanical properties, making it a reliable choice for demanding environments.

KEY FEATURES

- Excellent corrosion resistance
- High strength
- Shock loading capability
- Good abrasion resistance
- Cryogenic properties

CHEMICAL PROPERTIES

Copper (Cu)	Aluminium (Al)	Nickel (Ni)	Iron (Fe)	Manganese (Mn)	Zinc (Zn)	Silicone (Si)	Lead (Pb)
77.5-83.5%	8.5-10.5%	4-5.5%	2-4%	0.5%	0.3%	0.1%	0.05%

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	690-850
Yield strength (N/mm ²)	310-590
Elongation (%)	10-20
Hardness - Vickers (HV)	180-220
Hardness - Brinell (HB) max	150-190

PHYSICAL PROPERTIES

Density (kg/m ³)	7650	
Modulus of elasticity (Gpa)	115	
Mean coefficient of thermal expansion	0-100°C (µm/m/°C)	16.5
	0-350°C (µm/m/°C)	17.7
	0-538°C (µm/m/°C)	18.7
Thermal conductivity	at 100°C (W/m.K)	37.5
	at 500°C (W/m.K)	29.5
Specific Heat 0-100°C (J/kg.K)	435	
Electrical conductivity (IACS 20°C)	7-10	
Melting point (°C)	1040	

MARKET SECTORS



Marine Equipment

Propellers, pump shafts, valve stems, fasteners



Oil & Gas Industry

Valve bodies and stems, pump components, wear plates



Aerospace Industry

Landing gear components, bushings, bearings, actuators



Electrical Industry

Connectors, terminals switch components



Automotive Industry

Bushings, bearings, valve components, gears, actuators



Engineering Components

Heavy duty bearings, gears, worm wheels, wear plates