



CW103C

Pure Copper / Conductive Copper

Standardization:

Beryllium/Cobalt Copper Alloy

ALLOY DESCRIPTION

High-hardness beryllium and cobalt copper alloy that acquires excellent mechanical strength through precipitation hardening. Uniquely combines the hardness of steel with copper's electrical conductivity.

CHEMICAL COMPOSITION (% WEIGHT)

Fe (%)	Ni (%)	Co (%)	Be (%)
max 0.2	0.8 - 1.3	0.8 - 1.3	0.4 - 0.7

MECHANICAL PROPERTIES (MIN.)

Elongation (A)	20
Hardness (HB)	60 - 130

PHYSICAL PROPERTIES

Density	8.20 [kg/dm³]
Melting Temperature	~860 - 980 [°C]
Elk. Conductivity	~15 - 25 [MS/m]
Elasticity Modulus	130 [kN/mm²]

CASTING / MANUFACTURING METHODS

EK	Extrusion (Rod/Profile)
GS	sand casting
GM	Permanent mold casting
GZ	Centrifugal casting

AREAS OF APPLICATION

Resistance Welding Electrodes

Heavy Duty Springs

Injection Molds

Aerospace Parts

Submarine Cables

MACHINABILITY & CHARACTERISTICS

Particularly suitable for welding electrodes and high-stress machine parts. Yield stress and fatigue strength are maximized via aging heat treatment. Machinability is medium to difficult.

The technical information specified in this document reflects the standard reference values of international EN and DIN norms. Deviations may be observed depending on final production conditions.

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