



## CuBe1.7

Beryllium Copper Alloy

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 | max 0.3 | max 0.3 | 1.6 - 1.8 |

### MECHANICAL PROPERTIES (MIN.)

Hardness (HB) **90 - 150**

### PHYSICAL PROPERTIES

Density **8.20 [kg/dm<sup>3</sup>]**

Melting Temperature **~860 - 980 [°C]**

Elk. Conductivity **~15 - 25 [MS/m]**

Elasticity Modulus **130 [kN/mm<sup>2</sup>]**

### 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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