C17500 Beryllium Copper

Smiths Advanced Metals

High Conductivity

Cobalt beryllium copper (Alloy 10).

C17500 beryllium copper (Alloy 10) is a high conductivity grade which uses cobalt rather than nickel as its additional alloying element.

Its mechanical properties are very similar to C17510 (Alloy 3), with slightly lower thermal conductivity and melting temperature. The alloy offers good hot working and excellent cold working properties, and is forged at 649–885 °C.

The product finds typical use in current-carrying and wear components. Extraction is required where grinding, welding or machining produces dust or fume.

We stock C17500 beryllium copper round bar in a broad range of sizes.



Key Applications

- Welding electrodes
- Current-carrying springs
- Electrical & electronic connectors
- Bearings & bushes
- Corrosion-resistant components

Benefits

- High electrical & thermal conductivity
- Excellent cold working properties
- Good hot working properties

Grades / Specifications

- UNS C17500 / CW104C
- ASTM B441 / B534
- MIL-C-81021
- SAE J461 / J463

* Chemical Composition (weight %)

	Be	Co	Fe	Si	Al	Cu
min.	0.40	2.40				Rem
max.	0.70	2.70	0.10	0.20	0.20	

* As per ASTM B441

Metallurgical Support

Our UKAS Accredited Testing Laboratory is unique to the UK stockholding sector, and we provide comprehensive metallurgical support, including an extensive range of testing services.

Processing

We supply products in both metric and imperial sizes and process your beryllium copper in-house. We stock materials in closer incremental sizes, which results in the supply of engineering materials where the need to machine the raw material down is not required.

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bsi ISO 9001 Quality Management Systems CERTIFIED
AS/EN 9100 Aviation Space and Defence CERTIFIED
EN 9120 Aviation Space and Defence CERTIFIED
UKAS TESTING 1930

All information in our data sheet is based on approximate testing and is stated to the best of our knowledge and belief. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of trading.

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