# C17510 Beryllium Copper

Smiths Advanced Metals



## High Thermal Conductivity

Nickel beryllium copper (Alloy 3).



C17510 beryllium copper (Alloy 3) is a high conductivity grade offering moderate strength with high thermal and electrical conductivity.

The material is non-magnetic with excellent resistance to thermal fatigue. Corrosion resistance is similar to pure copper: it resists seawater, most organic solutions, non-oxidising acids and dilute alkalis, but is not recommended with ammonium hydroxide or strongly oxidising acids.

Supplied fully heat treated with certified mechanical properties, it needs no further heat treatment. Grinding, welding or machining that produces dust or fume requires extraction.

We stock C17510 beryllium copper in a broad range of sizes and shapes.

## Key Applications

- **Resistance welding electrodes**
- **Metal & plastic moulding**
- **Thermal management**
- **Marine applications**
- **Chemical processing equipment**

## Benefits

- **High thermal & electrical conductivity**
- **Excellent resistance to thermal fatigue**
- **Supplied fully heat treated**

## Grades / Specifications

- **UNS C17510 / CW110C**
- **ASTM B441 / BS EN 12163**
- **RWMA Class 3**

## * Chemical Composition (weight %)

| | Be | Ni | Co | Fe | Si | Al | Cu |
|---|---|---|---|---|---|---|---|
| min. | 0.20 | 1.40 | | | | | Rem |
| max. | 0.60 | 2.20 | 0.30 | 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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ISO 9001 Quality Management Systems CERTIFIED
AS/EN 9100 Aviation Space and Defence CERTIFIED
EN 9120 Aviation Space and Defence CERTIFIED
UKAS TESTING 1930

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