

Alloy 10

Technical Datasheet



Service. Quality. Value.

Beryllium Copper Alloy

Typical Applications

- Bearings and bushes
- Plastic moulds
- Corrosion resistant components
- Current carrying springs
- Welding electrodes
- Electrical and electronic connectors

Product Description

Alloy 10 is a high conductivity beryllium copper that has very similar mechanical properties to Alloy 3. However this alloy has an additional alloying element of cobalt rather than nickel giving it a slightly lower thermal conductivity and melting temperature.

Hot & Cold Workability

Good hot working properties. Excellent cold working properties.

Availability

Plate, strip, rod and wire.

Key features:

- High conductivity beryllium copper alloy
- Introduction of cobalt rather than nickel giving it a slightly lower thermal conductivity and melting temperature.

Weldability

Soldering, brazing, gas shielded arc welding, coated metal arc welding, spot welding, seam welding and butt welding are all recommended

Forging

Alloy 10 beryllium copper alloys are forged at temperature ranging from 649 to 885°C (1200 to 1625°F).

Related material specifications

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

Chemical Composition (weight %)

	Cu	Be	Co
Min	Bal	0.4	2.4
Max		0.7	2.7

Physical & Mechanical Properties

Density	8.36	g/cm ³
Melting point	1029	°C
Elastic Modulus at 25°C	117	GPa
Tensile Strength	310 - 793	MPa
Yield Strength	172 - 758	MPa
Elongation	28	%

Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

UK Service Centres:

Smiths Belfast **02895 908 897**
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Quality & Testing:



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