

Alloy 33-25

Technical Datasheet



Free Machining High Performance Copper Beryllium alloy

Service. Quality. Value.

Typical Applications

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

Product Description

Alloy 33-35 is a free machining high performance copper beryllium alloy. It is an excellent substitute for Alloy 25 if enhanced machinability is required.

Hot & Cold Workability

Good hot working properties. Excellent cold working properties.

Availability

Plate, strip, rod and wire.

Key features:

- Free machining high performance copper beryllium alloy
- 0.2% (min) lead addition.
- Good substitute for Alloy 25 where enhanced machinability is a requirement.

Weldability

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

Forging

Alloy 33-25 beryllium copper alloys are forged at temperature ranging from 649 to 816°C (1200 to 1500°F).

Related material specifications

- ASTM B196
- ASTM B197
- C17300

Chemical Composition (weight %)

	Be	Pg	Ni + Co	Ni + Co + Fe	Cu + Be + Pg + Ni + Co	
Min	1.80	0.20	0.20		99.5	
Max	2.00	0.6		0.6		

Mechanical Properties

Hardness, Rockwell B	80.0 - 85.0	
Tensile strength, ultimate	515 - 585	MPa
Tensile strength, yield	275 - 345	MPa
Elongation at break	15.0 - 30.0	%
Modulus of elasticity	125 - 130	GPa
Poissons ratio	0.300	
Machinability (UNS C36000 (free-cutting brass) = 100%)	20	%
Shear modulus	50.0	GPa

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:

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Quality & Testing:



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