

Material Information



Brass C360

Introduction

Brass C360, also known as Free-Cutting Brass or 360 Brass, is a copper-zinc-lead alloy containing approximately 60–63% copper and 2.5–3.0% lead. It is specifically formulated for high-speed machining and offers excellent machinability, good corrosion resistance, and good strength, making it a popular choice for precision CNC machined components.

Advantages

Excellent machinability, good strength, good corrosion resistance, and the ability to produce short, easily managed chips during machining. Brass C360 is rated at 100% machinability and is particularly well suited to high-speed CNC turning, drilling, threading, and other machining operations.

Disadvantages

Brass C360 has limited cold-working capability and poor weldability because of its lead content. It also has lower electrical conductivity than commercially pure copper, making it less suitable for applications where maximum electrical conductivity is required.

Tolerance

3DSPRO can manufacture and inspect to tight tolerances, including sub +/- 0.001" tolerances, per your drawing specifications and GD&T callouts.

Recommendation

The excellent machinability, good strength, and corrosion resistance of Brass C360 make it suitable for CNC machined components used in plumbing, industrial equipment, automotive, and general engineering applications. It is particularly suitable for high-volume precision parts where efficient machining, short cycle times, and good surface quality are important.

Material Specifications (For reference only.)	
Tensile strength	124 to 310MPa
Fatigue strength	138MPa
Elongation at Break	53%
Hardness	63 to 130 HB
Density	

	8.49 g/cm ³
--	------------------------

Attention

Brass C360 contains lead, so material selection should take the intended application and applicable regulations into account. It is not suitable for applications where lead content is restricted, such as certain potable-water contact applications. C360 also has limited cold-forming capability and is not recommended for welding-intensive designs.

Applications

3DSPRO finds people using Brass C360 to make functional parts and prototypes in the following industries and applications.

Plumbing components:

Faucet stems, valve stems, valve seats, fittings, and other precision-machined plumbing hardware.

Industrial equipment:

Gears, pinions, machine components, couplings, shafts, and other parts requiring excellent machinability.

Automotive parts and supplies:

Fittings, connectors, valve components, fasteners, and other small precision mechanical parts.

Consumer and general hardware:

Locks, gauges, screws, threaded components, instrument parts, and other CNC machined hardware.