



Copper Alloy

Data sheet

C26000 Brass

Material NOTE: The following data is for general reference only and NOT FOR DESIGN.

General

C26000 grade brass or commonly referred to as 70/30 or Cartridge brass is a high purity copper alloyed with 30% zinc.

Exhibiting a high degree of machinability it is preferred choice of product for cold forging components in the repetition engineering industries.

Brass is a readily cold worked metal and will increase in tensile strength and reduced ductility with progressive cold work. Following cold work, brass can be softened by annealing or stress relieving heat treatments.

Alloy designations

UNS C26000, CuZn30, 70/30Brass, Cartridge brass, 26000,CZ106

Applications

- Cold forged components, fasteners and hardware

Substitutable Alloys

Alloys that can be easily substituted include C27000 copper alloy , Cu65/Zn35 brass.

Chemical Composition¹

Alloy	Cu	Zn	Fe	Pb	Other
Nominal	70%	30%			
C26000 70/30	68.5-71.5	28.5- 30.5	0.05	0.07	Trace

NB: Assays in % max.

Physical Properties

Property	Value
Density	8.58 g/ cc
Melting point	965°C

¹ Complying with ASTM Copper Association

Modulus of Elasticity	110GPA
Resistivity	37E-08 Ohm-m
Electrical Conductivity	28% IACS

Mechanical properties #

AS1567 Copper & Alloys – drawn wire, rod bar & strip

Temper	Ultimate Tensile strength	Elongation
	Mpa	%
O (Annealed)	310	25-40
¼ hard	390-460	>20
½ hard	460-620	10-15
H (Hard Drawn)	>620	7%
SH (spring hard)	>620	< 2%

#: Typical averages

Physical performance

Ductility	Is a measure of elongation and ability to bend. Annealed brass is highly ductile.
Weldability	Readily weldable using commercial filler metals Soldering- excellent Brazing- Good Oxy cutting- Unable to due to oxide formation
Fabrication	Cold working capacity- excellent Hot forging rating- 65% of brass Machinability rating- 20% of free cutting brass Is readily formable in the annealed condition
Corrosion	Brass will oxidise in exposure to air. It is recommended that storage of bare brass includes a satisfactory coating and/ or atmosphere. Brass suffers corrosion in environments of ammonia, amines, ammonia salts, oxidising acids, persulphates, perchlorates and mercury salts as it suffers stress corrosion cracking. Brass may undergo dezincification in stagnant or slow moving salt, brackish or acidic solutions
Appearance	Yellow like appearance in drawn condition.
Surface coatings	Copper alloy is readily anodised to provide a wear coating. Brass can be plated with many noble metals.
Heat Treatment	Brass is readily annealed at 500-650°C Stress relieving temperatures >350°C

	Brass will oxidise (blacken) in exposure to air at temperatures above 65°C. As such `bright annealing` is typically undertaken in inert atmospheres, typically Nitrogen or Nitrogen / 2% Hydrogen mixtures.
Surface cleaning	Wire surface can be cleaned readily with mineral solvents. Bright dips (dichromate based) are used to return dulled copper to a bright finish

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