

BRASS ALLOYS

Flat, Shaped and Round Wire

Applications

Coinage, Medals, Electrical switches and receptacles, Radiator cores, Fasteners and eyelets, Fuse clips, Jewelry, Architectural components, Deep drawing applications

Description

Brass alloys are copper zinc alloys which makes these alloys stronger and more durable than copper alloys. Alloys with high zinc levels are yellowish in color while those with less zinc start to turn reddish in color, and are sometimes called red brass.

Chemistry Typical

UNS #	COPPER	ZINC	LEAD	IRON
C21000	94.0-96.0	Balance	0.05 max	0.05 max
C23000	84.0-86.0	Balance	0.05 max	0.05 max
C26000	68.5-71.5	Balance	0.07 max	0.05 max
C26800	64.0-68.5	Balance	0.09 max	0.05 max
C28000	59.0-63.0	Balance	0.09 max	0.05 max

* Contact Ulbrich Wire for request regarding the availability of other copper alloys.

* Contact Ulbrich Technical Department for limits for additional trace elements and impurity levels.

* Copper plus sum of named elements 99.8% min.

* Copper plus sum of named elements 99.7% min.

Physical Properties

Typical Density: 0.306 - 0.320 lb/in³, 8.47 - 8.86 g/cm³

Electrical Conductivity: (% IACS at 68°F 20°C, annealed):
27 - 56%

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Thermal Conductivity: BTU-in/hr-ft²-°F
At 68°F: 67 - 135

Mean Coefficient of Thermal Expansion: $\mu\text{in/in-}^\circ\text{F}$
68 - 572 °F: 10 - 11.3

Modulus of Elasticity: KSI
15 - 17 x 10³ in tension

Forms

Profile, Round, Flat, Square

Mechanical Properties at Room Temperature

Properties: Annealed Typical

Ultimate Tensile Strength: 34 KSI min (234 MPa min)
Yield Strength: 10 KSI min (69 MPa min)
Elongation: 45% min

Properties: Tempered

Brass alloys can be cold worked to various tempers.

** Actual physical and mechanical properties are alloy dependent. Contact Ulbrich Technical Service for alloy specific properties.*

Additional Properties

Corrosion Resistance

Contact Ulbrich Wire for specific information.

Wire Finishes

XC - Extra clean. Annealed or annealed and cold rolled.
Contact Ulbrich Wire with special finish requests.

Heat Treatment

Brass alloys are not hardenable by heat treatment.

Welding

Contact Ulbrich Wire for specific information.

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