

Copper C26000

Extruded and drawn

Product description	Cartridge brass 70%
Tempers	H01 quarter hard, H02 half hard, H04 hard
Solids	3/8" to 2 1/2" O.D.
Hex	3/8" to 2" O.D.
Standard lengths	144"

Similar or equivalent specification

CDA	ASTM	SAE	AMS	Federal	Military	Other
C26000	B927 B927M	J461 J463				70/30

Chemical composition

Cu (%)	Pb (%)	Zn (%)	Fe (%)
68.50-71.50	0.07	Remain	0.05

Chemical composition according to ASTM B927/B927M-23

Note: Cu + sum of named elements, 99.7% min. Single values represent maximums.

Typical uses

Architecture

Grillwork

Automotive

Electrical connectors, heater cores, odometer contacts, radiator cores, radiator tanks, radiator tube, tanks, thermostats

Builders Hardware

Decorative hardware, door knobs, finish hardware, hinges, kick plates, locks, push plates

Consumer

Bird cages, buttons, chain links, coinage, costume jewelry, etched articles, fireplace screens, lamps, pen/pencil inserts and clips, planters, shells (electrical sockets), snaps, syringe parts, watch parts

Electrical

Flashlight shells, lamp fixtures, reflectors, screw shells, terminal connectors

Fasteners

Eyelets, fasteners, grommets, pins, rivets, screws

Industrial

Air pressure conveyer systems, bead chain, chain, heat exchangers, liners, power cylinders, pumps, sound-proofing equipment, springs, tubing for instruments and machines, wire screens

Ordnance

Ammunition, ammunition cartridge cases, mechanical housings for lighters, shells (mechanical housings for ammunition)

Other

Stencils, washers

Plumbing

Bathroom fixtures, faucet escutcheons, fittings, plumbing accessories, plumbing brass goods, traps

C26000 continued

Machinability

Copper alloy UNS no.	Machinability rating	Density (lb/in ³ at 68° F)
C26000	30	0.308

Mechanical properties

Mechanical properties according to ASTM B927/B927M-23

C26000

H01 quarter hard

Size range under ½" diameter rod

Tensile strength, min		Yield strength, at 0.5% extension under load, min		Elongation, 4x diameter or 4x thickness, min	Rockwell "B" hardness	Remarks
ksi	MPa	ksi	MPa	%	typical HRB	
50	345	30	205	20	55	

Size range ½" diameter rod to 1" inclusive

Tensile strength, min		Yield strength, at 0.5% extension under load, min		Elongation, 4x diameter or 4x thickness, min	Rockwell "B" hardness	Remarks
ksi	MPa	ksi	MPa	%	typical HRB	
48	330	25	170	24	55	

Size range over 1" diameter rod

Tensile strength, min		Yield strength, at 0.5% extension under load, min		Elongation, 4x diameter or 4x thickness, min	Rockwell "B" hardness	Remarks
ksi	MPa	ksi	MPa	%	typical HRB	
46	315	20	140	28	55	

C26000 continued

C26000
H02 half hard

Size range under ½" diameter rod

Tensile strength, min		Yield strength, at 0.5% extension under load, min		Elongation, 4x diameter or 4x thickness, min	Rockwell "B" hardness	Remarks
ksi	MPa	ksi	MPa	%	typical HRB	
57	395	35	241	15	70	

Size range ½" diameter rod to 1" inclusive

Tensile strength, min		Yield strength, at 0.5% extension under load, min		Elongation, 4x diameter or 4x thickness, min	Rockwell "B" hardness	Remarks
ksi	MPa	ksi	MPa	%	typical HRB	
54	370	32	220	20	70	

Size range over 1" diameter rod

Tensile strength, min		Yield strength, at 0.5% extension under load, min		Elongation, 4x diameter or 4x thickness, min	Rockwell "B" hardness	Remarks
ksi	MPa	ksi	MPa	%	typical HRB	
50	345	30	205	25	70	

C26000 continued

C26000 H04 hard

Size range under ½" diameter rod

Tensile strength, min		Yield strength, at 0.5% extension under load, min		Elongation, 4x diameter or 4x thickness, min	Rockwell "B" hardness	Remarks
ksi	MPa	ksi	MPa	%	typical HRB	
70	485	50	345	10	82	

Size range ½" diameter rod to 1" inclusive

Tensile strength, min		Yield strength, at 0.5% extension under load, min		Elongation, 4x diameter or 4x thickness, min	Rockwell "B" hardness	Remarks
ksi	MPa	ksi	MPa	%	typical HRB	
65	450	45	310	15	82	

Size range over 1" to 2" diameter rod

Tensile strength, min		Yield strength, at 0.5% extension under load, min		Elongation, 4x diameter or 4x thickness, min	Rockwell "B" hardness	Remarks
ksi	MPa	ksi	MPa	%	typical HRB	
60	415	40	275	20	82	

Physical properties

	US customary	Metric
Melting point – liquidus	1750 °F	954 °C
Melting point – solidus	1680 °F	916 °C
Density	0.308 lb/in ³ at 68 °F	8.53 gm/cm ³ at 20 °C
Specific gravity	8.53	8.53
Electrical conductivity	28% IACS at 68 °F	0.162 MegaSiemens/cm at 20 °C
Thermal conductivity	70 Btu/sq ft/ft hr/°F at 68 °F	121.2 W/m at 20 °C
Coefficient of thermal expansion 68-572	11.1 · 10 ⁻⁶ per °F (68-572 °F)	19.2 · 10 ⁻⁶ per °C (20-300 °C)
Specific heat capacity	0.09 Btu/lb/°F at 68 °F	377.1 J/kg at 20 °C
Modulus of elasticity in tension	16000 ksi	110317 MPa
Modulus of rigidity	6000 ksi	41369 MPa

Physical properties provided by CDA

C26000 continued

Fabrication properties

Technique	Suitability
Soldering	Excellent
Brazing	Excellent
Oxyacetylene welding	Good
Gas shielded arc welding	Good
Coated metal arc welding	Not recommended
Spot weld	Fair
Seam weld	Not recommended
Butt weld	Good
Capacity for being cold worked	Excellent
Capacity for being hot formed	Fair
Machinability rating	30

Fabrication properties provided by CDA

Thermal properties

Treatment	Minimum*	Maximum*
Annealing	800	1400
Hot treatment	1350	1550

Thermal properties provided by CDA

**Temperature is measured in Fahrenheit.*