

CARTRIDGE BRASS, 70% SHEET AND STRIP

CDA 260

Chemical Composition

Copper, 70% Zinc, 30%

Cartridge Brass, 70% has excellent tensile strength and is very ductile, being better than Yellow Brass in this respect. It can be subjected to severe cold working in deep drawing, spinning, rolling, stamping, flaring and forming. Formerly known as Deep Drawing Brass, Grommet Brass, Spring Brass and Spinning Brass, these names are an indication of its fabricating qualities. It is ideally suited for the production of artillery and small arms cartridge cases and for musical instruments, snap fasteners, eyelets, reflectors, lighting fixtures, and automobile radiators.

Fabrication Properties*

Machinability (Free-Cutting Brass — 100)		Suitability for Being Joined by:	
Rating	30	Soft Soldering	Excellent
Type of Chip	L	Brazing	Excellent
Capacity for Being Cold Worked	Excellent	Oxyacetylene Welding	Good
Capacity for Being Hot Formed	Fair	Carbon Arc Welding	Fair
Hot Forgeability Rating		Gas Shielded Arc Welding	Fair
(Forging Brass — 100)	—	Coated Metal Arc Welding Not Recom.	
Hot Working Temperature —		Resistance Welding:	
1350-1550° F. or 725-850° C.		Spot	Good
Annealing Temperature —		Seam	Not Recom.
800-1400° F. or 425-750° C.		Butt	Good

Mechanical Properties*

(ALL 0.040 GAUGE STRIP)

	0.035 mm Annealed	Spring (60%)
Tensile Strength, p.s.i.	49,000	94,000
Yield Strength, p.s.i.	17,000	65,000
Shear Strength, p.s.i.	34,000	48,000
Elongation, % in 2 inches	57	3
Rockwell Hardness	F68, 30T31	B91, 30T77

Physical Properties*

Melting Point, °F.	Solidus — 1680; Liquidus — 1750
Density, lbs. per cu. in. at 68°F.	0.308
Specific Gravity	8.53
Coefficient of Thermal Expansion	0.0000111 per °F. from 68 to 572° F.
Thermal Conductivity	70 btu/sq. ft./ft./hr./°F. at 68° F.
Electrical Resistivity (Annealed)	37 Ohms (circ. mil./ft.) at 68° F.
Electrical Conductivity (Annealed)	28% IACS at 68° F.
Thermal Capacity (Specific Heat)	0.09 btu/lb./°F. at 68° F.
Modulus of Elasticity (Tension)	16,000,000 p.s.i.
Modulus of Rigidity	6,000,000 p.s.i.

Chemically Equivalent Specifications

S. A. E.	70A and B
A. S. I. M.	B36, Alloy 6
A. M. S.	4505D, 4507C
Federal	QQ-B-613b, Comp. 2 and 11
Military	MIL-C-895A (Navy)