NWB®

High Performance Bearing Technology

C31400 LEADED COMMERCIAL BRONZE



Leaded Commercial Bronze C31400 combines the natural corrosion resistance of C22000 with the machinability typical of leaded brasses. It is an alpha brass nominally composed of 89% copper and 9% zinc, but it also contains approximately 2% lead to impart free-cutting characteristics. The relatively low zinc content provides excellent corrosion resistance in potable water along with a pleasing golden color that matches C22000 hardware.

Alternative Specifications

ASTM B-140
MIL-V-18436

Physical Properties

Melting Point - Liquidus	1920 F
Melting Point - Solidus	1850 F
Density	0.319 lb/in^3 at 68 F
Specific Gravity	8.83
Electrical Resistivity	24.7 ohms-cmil/ft at 68 F
Electrical Conductivity	42 % IACS at 68 F
Thermal Conductivity	104.0 Btu · ft/(hr · ft2·°F) at 68F
Coefficient of Thermal Expansion	10.2 ·10^{-6} per °F (68-572 F)
Specific Heat Capacity	0.09 Btu/lb/°F at 68 F
Modulus of Elasticity in Tension	17000 ksi
Modulus of Rigidity	6400 ksi
Machinability Rating	80

Room Temp Tensile & Hardness Data

TEMPER	SECTION SIZE (INCHES)	TENSILE (KSI) MIN	YIELD (KSI) MIN	ELONGATION IN HD MIN
O60 (Ann.)	All Sizes	35	10	25%
H02 (1/2 H)	Under 1/2”	50	30	7%
	1/2” - 1”	45	27	10%
	Over 1”	40	25	12%

Typical Uses

Builders Hardware

Door Knobs and Handles, Push/Pull Bars

Electrical

Connectors for Wire and Cable, Electrical Plug Type Connectors

Fasteners

Screws, Nuts

Other Industrial

Pickling Fixtures, Pickling Racks, Pickling Crates, Screw Machine Parts, Plumbing Components, Dezinctification Applications

Chemical Composition

	Cu	Fe	Pb	Ni	Zn
min/max	87.5-90.5	.10	1.3-2.5	.7	Rem.
nominal	89.0	-	1.9	-	9.1

Note: Cu + Sum of Named Elements, 99.5% min.

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