NWB®

High Performance Bearing Technology

C31600 NICKEL LEADED COMMERCIAL BRONZE



Similar to C31400, Leaded Commercial Bronze, Nickel Bearing C31600 is composed of approximately 89% copper, 8% zinc, and 2% lead, but also contains 1% nickel. This alloy combines the natural corrosion resistance and machinability of C31400 with a higher tensile and yield strength resulting from the controlled addition of nickel. It also possesses a particular resistance to stress corrosion cracking. It is an alloy suitable for outdoor use where higher strength is required.

Alternative Specifications

ASTM B-140
MIL-V-18436

Physical Properties

Melting Point - Liquidus	1900 F
Melting Point - Solidus	1850 F
Density	0.32 lb/in^3 at 68 F
Specific Gravity	8.86
Electrical Resistivity	32.4 ohms-cmil/ft at 68 F
Electrical Conductivity	32 % IACS at 68 F
Thermal Conductivity	81.0 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
Machinability Rating	80

Typical Uses

Builders Hardware
Hardware

Electrical
Connectors

Fasteners
Screws, Nuts, Fasteners

Other Industrial
Screw Machine Parts

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%
H04 (H)	2” and Under	60	50	6%

Chemical Composition

	Cu	Fe	Pb	Ni	P	Zn
min/max	87.5-90.5	.10	1.3-2.5	.7-1.2	.04-.10	Rem.
nominal	89.0	-	1.9	1.0	.7	8.1

Note: Cu + Sum of Named Elements, 99.6% min.

NWB®
National Distribution Centre
James Road
Adwick-Le-Street
Doncaster, South Yorkshire,
DN6 7HH
T: +44 1302 33066 F: +44 1302 330377