NWB®

High Performance Bearing Technology

C95520 NICKEL ALUMINUM BRONZE (AMS 4881)



The additional heat treating process improves mechanical properties and the strength to weight ratio exceeding the range of typical aluminum bronzes. C99520 is commonly used in applications involving heavy loads abrasion, friction, and deformation at high temperatures. In many cases C99520 can replace C63020 with the advantage of this material being available in tube form, which provides economic cost savings to you the customer.

Alternative Specifications

Continuous	**Centrifugal**
ASTM B-505	ASTM B-271
AMS 4881	AMS 4881
SAE J462, J461	

Physical Properties

(Based on C95500)

Melting Point - Liquidus	1930 F
Melting Point - Solidus	1900 F
Density	0.272 lb/in^3 at 68 F
Specific Gravity	7.53
Electrical Resistivity	122.8 ohms-cmil/ft at 68 F
Electrical Conductivity	8.5% IACS at 68 F
Thermal Conductivity	24.2 Btu · ft/(hr · ft2·°F) at 68F
Coefficient of Thermal Expansion	9.0 ·10^{-6} per °F (68-572 F)
Specific Heat Capacity	0.1 Btu/lb/°F at 68 F
Modulus of Elasticity in Tension	16000 ksi
Magnetic Permeability	1.2
Machinability Rating	50

Room Temp Tensile & Hardness Data

CASTING	CONDITION	TENSILE STRENGTH (KSI) MIN	YIELD STRENGTH (KSI) MIN	ELONGATION IN HD MIN	BRINELL (3000 KG)
CENTRIFUGAL	TH04	125	95	2%	262

Typical Uses

Oil & Gas
Rock Bit Bearings, Bushings, & Washers, BOP Parts, Wellhead Components

Aerospace
Landing Gear Bushings and Bearings

Automotive
Bearings, Off-Highway Truck Bushings, Forming Roll Bearings

Marine
Pump Parts, Bushings

Industrial
Cams, Shafting, Hydraulic Bushings for Earth Moving Equipment, Valve Balls, Cryogenics, Drill Guide Bushings

Military
Tank Track Bearings, Bushings, Aircraft Components

Chemical Composition

	Cu	Al	Cr	Co	Fe	Pb	Mn	Ni(1)	Si	Sn	Zn
min/max	74.5 min	10.5-11.5	.05	.20	4.0-5.5	.03	1.5	4.2-6.0	.15	.25	.30
nominal	-	11.0	-	-	4.7	-	-	5.1	-	-	-

(1) Ni value includes Co.
Note: Cu + Sum of Named Elements, 99.5% min.

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