

Advantages of NBM CONTINUOUS CAST AMS 4880D TUBE



The real advantages of NBM continuous cast AMS 4880D tube over AMS 4640 solid round bars

NBM Metals' new state of the art foundry utilizes computer controlled continuous cast process which gives us elevated mechanical properties, at a lower cost than conventional centrifugal or wrought production methods.

Advantages are:

COST ADVANTAGE

- Less material cost-tube vs. solid
- Less machining time-saves money
- More potential profits
- Less freight cost
- Less tooling cost
- Faster cycle time
- Less inventorying carrying cost

MACHINING ADVANTAGES

- Huge reduction in scrap
- Big machining advantages hollow vs solid
- Better machined surface
- Better NDT light inspection
- Improved LPI acceptance
- Higher elongation 6% vs. 2%
- Similar mechanical properties

AVAILABILITY ADVANTAGES

- Huge up front cost savings
- Better availability
- Shorter lead times
- Support A.O.G deliveries

OTHER ADVANTAGES

- Blanket orders for JIT
- First operation rough blanks available
- No premium for flange configuration



NBM **NBM Metals**
www.nbmmetals.com

The Leading USA Manufacturer & Master Distributor
of Brass, Bronze, & Copper Alloys

ADVANTAGES OF NBM CONTINUOUS CAST AMS 4880D TUBE

AMS 4880 Standards

Section Size (Inches) (W/T)	Tensile Strength (KSI) Min	Yield Strength (KSI) Min	Elongation In Hd Min	Brinell (3000 Kg)
1" and under	105	62.5	9%	-
1" and over	95	50	8%	195

AMS 4880D typical results obtained by NBM production

Section Size (Inches)	Tensile Strength (KSI) Min	Yield Strength (KSI) Min	Elongation in 4D	Hardness
4" and under	105	62.5	9%	195 HB (min)
4" and over	95	56	9%	195 HB (min)

AMS 4640 Standards

Section Size (Inches)	Tensile Strength (KSI) Min	Yield Strength (KSI) Min	Elongation	Hardness
2" - 3"	105	55	10%	B70 (min)

Chemical Composition (AMS 4880D)

	Cu(1)	Al	Fe	Mn	Ni(1)	Sn	Zn	Ni(1)	Sn	Zn
Min/Max	78.0 min	9.7-10.9	2.0-3.5	1.5	4.5-5.5	.20	.30	4.2-6.0	.25	.30
Nominal	-	10.3	2.7	-	5.0	-	-	5.1	-	-

(1) Ni value includes Co.

Note: Cu + Sum of Named Elements, 99.8% min

Physical Properties

(Based on AMS4880)

Melting Point - Liquidus °F.....	1930
Melting Point - Solidus °F.....	1900
Density lb/cu in @ 68 °F.....	0.272
Specific Gravity.....	7.53
Electrical Resistivity ohms-cmil/ft @ 68 °F.....	122.8
Electrical Conductivity % IACS @ 68 °F.....	8.5
Thermal Conductivity Btu/sq ft/ft hr/°F @ 68 °F.....	24.2
Coefficient of Thermal Expansion 10 ⁻⁶ per °F (68-212 °F).....	90
Specific Heat Capacity Btu/lb/°F @ 68 °F.....	0.1
Modulus of Elasticity in Tension ksi.....	16000
Magnetic Permeability.....	1.2
Machinability Rating.....	50%

Sizes Available from NBM

Solid Bar.....	½" - 2 ½" diameter
Hollow Bar.....	1" O.D. thru 16" O.D.

General Notes

- Our material is DFARS compliant.
- Many popular sizes are now available from stock.
- Other sizes available on request.

The values listed on this document represent reasonable approximations suitable for general engineering use. Due to commercial variations in composition and to manufacturing limitations, they should not be used for specification purposes. See applicable A.S.T.M. Specification references.

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