

# Advantages of NBM CONTINUOUS CAST AMS 4881D TUBE



## The real advantages of NBM continuous cast AMS 4881D tube over AMS 4590 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](http://www.nbmmetals.com)

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

# ADVANTAGES OF NBM CONTINUOUS CAST AMS 4881D TUBE

## AMS 4881D Standards

Section Size (Inches)	Tensile Strength (KSI) Min	Yield Strength (KSI) Min	Elongation	Hardness
1" and over	125	90	2%	26 HRC

## AMS 4881D typical results obtained by NBM production

Section Size (Inches)	Tensile Strength (KSI) Min	Yield Strength (KSI) Min	Elongation	Hardness
1" and over	135	100	5%-9% Range	32 HRC

## AMS 4590 Standards

Section Size (Inches)	Tensile Strength (KSI) Min	Yield Strength (KSI) Min	Elongation	Hardness
1" and over	130	95	6%	28 HRC

## Chemical Composition (AMS 4881D)

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

(1) Ni value includes Co.

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

## Physical Properties

(Based on AMS4881D)

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 <sup>-6</sup> 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

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

## 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.

USA/CANADIAN SALES  
(713) 869-9600  
sales@nbmmetals.com



EUROPEAN SALES  
+33 494 109 386  
info@nbmmetals.com



MEXICO SALES  
521 81 19 11 29 58  
ventas@nbmmetals.com

OTHER TERRITORIES  
trading@nbmmetals.com