



ToughMet® 3 TS 160U Rod & Wire

Materion Brush Performance Alloys' ToughMet® 3 TS160U is a spinodal copper nickel tin alloy available in rod and wire form for use in the aerospace and oil & gas markets where wear resistance, corrosion resistance and high strength properties are required.

CHEMICAL COMPOSITION (weight percent)

Alloy	Nickel	Tin	Copper
ToughMet 3 TS160U	15	8	Balance

PHYSICAL PROPERTIES

Elastic Modulus	Poisson's Ratio	Electrical Conductivity	Thermal Conductivity	Coefficient of Thermal Expansion	Density	Magnetic Permeability
21 x 10 ⁶ psi 144 kN/mm ²	0.32	<7% IACS <4 MS/m	22 Btu/hr/ft/°F 38 W/m/°C	8.9 x 10 ⁻⁶ in/in/°F 16.1 x 10 ⁻⁶ m/m/°C	0.325 lb/in ³ 9.00 g/cm ³	<1.001

MECHANICAL PROPERTIES

Diameter		0.2% Offset Yield Strength		Ultimate Tensile Strength		Elongation	Hardness
inch	mm	ksi	N/mm ²	ksi	N/mm ²	%	HRC
< 0.25	< 6.35	150	1035	160	1100	5	32
0.25 – 0.4	6.35 - 10	150	1035	160	1100	7	32

Typical Minimum Values

STANDARD AVAILABILITY

Sizes: up to 0.40 inch (10 mm) diameter

Length: Nominal 12 ft (3000 mm)

Coil Size: Up to 300 lbs.

Surface: Mill hardened finish

Straightness: 0.010" maximum curvature in 18" length (0.25 mm/457mm) for sizes <0.4" (10mm)

Tolerance: Up to 0.4 inch (10mm) +/- 0.002 inch (0.03mm)

SPECIFICATIONS

UNS C72900, ASTM B 249, AMS 4597

RELATED INFORMATION

Additional information on ToughMet® 3 rod & wire availability and size capability can be obtained by calling 800-375-4205.

North American Service Centers – Sales Inquiries

For strip, wire and rod under 0.4" (10 mm) diameter

Elmhurst, IL

TOLL FREE: 800.323.2438
LOCAL: +(1) 630.832.9650
FAX: +(1) 630.832.9657

For plate, tube, bar, and rod 0.4" (10 mm) diameter and over

Warren, MI

TOLL FREE: 800.521.8800
LOCAL: +(1) 586.772.2700
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To obtain a complete list of Materion's global distributor/agent network, visit us online at www.materion.com/BrushAlloys/ContactUs.



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MATERION CORPORATION

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