



ToughMet® 3 TS 150 Tube

Materion Brush Performance Alloys' ToughMet® 3 tube is a spinodal copper nickel tin alloy designed for use in the oil and gas market where wear resistant, high performance bearings and resistance to salt water corrosion, sour service and high strength properties are required. A typical application would be pressure housings for instrumentation packages. Precision tolerances are available.

CHEMICAL COMPOSITION (weight percent)

Alloy	Nickel	Tin	Copper
ToughMet 3	15	8	Balance

PHYSICAL PROPERTIES

Elastic Modulus	Poisson's Ratio	Electrical Conductivity	Coefficient of Thermal Expansion	Density	Magnetic Permeability
21 x 10 ⁶ psi 144 kN/mm ²	0.32	<7% IACS <4 MS/m	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

*10⁶ cycle fatigue limit

MECHANICAL PROPERTIES

0.2% Offset Yield Strength (Typical)		Ultimate Tensile Strength (Typical)		Elongation (Min)	Hardness (Min)	Grain Size (Typical)
(ksi)	(N/mm ²)	(ksi)	(N/mm ²)			
150	1034	158	1089	5	36	<100 micron

STANDARD AVAILABILITY

Outside Diameter: 2.25 inch (57 mm) maximum

Inside Diameter: 1.5inch (38.1 mm) minimum

Wall Thickness: approximately 10 - 20% of outside diameter

SPECIFICATIONS

UNS C72900, ISO 15156, NACE MRO 175

RELATED INFORMATION

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



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MATERION CORPORATION

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The logo for TOUGHMET, featuring the word "TOUGHMET" in a bold, italicized, sans-serif font with a blue outline, set against a white background.

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