

ToughMet® 3 A Strip

Materion's ToughMet 3 A Strip is a high-performance, spinodal copper-nickel-tin alloy designed to provide optimal formability and tribological characteristics when fully heat treated. This material is primarily used in wear-resistant bearings and controlled fragmentation devices.

Chemical Composition (Weight Percent)

Alloy	Nickel	Tin	Copper
ToughMet 3 A Strip	15	8	Balance

Typical Physical Properties

Elastic Modulus	Poisson's Ratio	Electrical Conductivity	Coefficient of Thermal Expansion (20 – 200 °C)	Density	Magnetic Permeability
18.5 x 10 ⁶ psi 128 kN/mm ²	0.3	< 7% IACS < 4 MS/m	9.1 x 10 ⁻⁶ in/in/°F 16.4 x 10 ⁻⁶ m/m/°C	0.325 lb/in ³ 9.00 g/cm ³	≤ 1.001

Typical Mechanical Properties

0.2% Offset Yield Strength (Typical)		Ultimate Tensile Strength (Typical)		Elongation (Minimum)
ksi	N/mm ²	ksi	N/mm ²	%
25 - 45	172 - 310	64 - 85	440 - 585	32

Standard Availability

Annealed strip: 0.006" (0.15 mm) to 0.090" (2.23 mm) by up to 12" (300 mm) wide coil.

Industry Standards and Specifications

UNS# C72900

Related Information

Additional technical information on ToughMet 3 A strip may be obtained by phoning +1.800.375.4205. For pricing and availability, phone +1.800.521.8800 for rod >0.5" (12.7 mm) diameter, +1.800.323.2438 for smaller diameter rod, or the number listed on the bottom of this page.



Disclaimer:

Only the buyer can determine the appropriateness of any processing practice, end-product or application. Materion does not make any warranty regarding its recommendations, the suitability of Materion's product, or its processing suggestions for buyer's end product, application or equipment.

The properties presented on this data sheet are for reference purposes only, intended only to initiate the material selection process. They do not constitute, nor are they intended to constitute, a material specification. Material will be produced to one of the applicable industry standards, if any, listed in the Industry Standards and Specification section.

Actual properties may vary by thickness and/or part number. Please contact your local sales engineer for detailed properties to be used in simulation.

Any properties marked as preliminary are subject to change at any time as the manufacturing process is further refined.

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