

QMet® 300 Strip

Materion's QMet 300 strip is a high-performance, heat-treated copper chromium silicon alloy designed to provide very high electrical and thermal conductivity while still retaining moderate strength. This non-beryllium-containing alloy is ideal for heat spreading structural components in consumer electronic devices as well as high-reliability, high-power electrical and electronic connectors.

Nominal Chemical Composition (Weight Percent)

Alloy	Chromium (Cr) + Silver (Ag) + Silicon (Si)*	Copper (Cu)
QMet 300	0.5 - 3.0	Balance**

*Exact composition is proprietary.

**Copper (Cu) plus sum of named elements is 99.5% minimum.

Typical Physical Properties

Elastic Modulus	Density	Typical Electrical Conductivity	Typical Thermal Conductivity*	Thermal Expansion Coefficient	Poisson's Ratio
20 - 22 Mpsi 137 - 152 GPa	0.321 lb/in ³ 8.89 g/cm ³	81% IACS 78% min. 47 MS/m	197 BTU/ft hr °F (188 min.) 341 W/m K (325 min.)	10.0 ppm/°F 18.0 ppm/°C	0.3

*Converted from electrical conductivity using Wiedemann-Franz Law.

Typical Mechanical Properties*

Temper	Data Type	0.2% Offset Yield Strength		Ultimate Tensile Strength		Elongation**	Hardness (HV)	90° Bend Formability	
		ksi	MPa	Ksi	MPa			Longitudinal (Good Way)	Transverse (Bad Way)
HT	Typical Range	72.5 min.	500 min.	78 min.	538 min.	5.0% min.	130 min.	0.20	0.20
	Design/Engineering Nominal Value	78	536	81	558	9%	170	0.20	0.20

*Properties may vary by thickness.

**Percent elongation valid only for strip greater than 0.004" (0.10 mm) thick.

