

SilCool* TIG830

Description

TIG830SP is a silicone grease that provides high thermal conductivity and low thermal resistance. The workability of TIG830SP makes it a good candidate for screen-printing and dispensing processes, and its dielectric and thermal performance contribute to help solving heat dissipation challenges in a variety of electronic components and designs.

Key Features and Typical Benefits

- High thermal conductivity
- Low thermal resistance
- Thin bond lines
- Highly workable - excels in screen-printing and dispensing processes
- Wide operating temperature range (-40 °C ~ 150 °C)
- Minimal weight loss at elevated temperatures
- Minimal ionic impurities

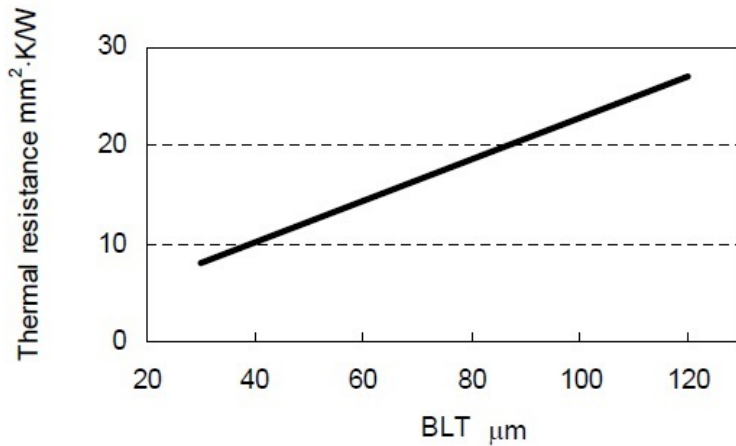
Typical Physical Properties

Property	Unit	Value
Color		Gray paste
Thermal conductivity ⁽²⁾	W/m·k	4.1
Viscosity (23 °C)	Pa·s	300
Penetration ⁽³⁾ (23 °C)		310
Specific Gravity (23 °C)		2.88
Bleed (150 °C, 24h)	wt%	0.0
Evaporation (150 °C, 24h)	wt%	0.3
Thermal Resistance ⁽¹⁾ (BLT 20 µm)	mm ² ·k/w	8
Volume Resistivity	Ω·cm	1.0 x 10 ¹²
Dielectric Strength	kV/0.25 mm	4.5
Volatile Siloxane (D ₄ -D ₁₀)	ppm	<100
Ionic Content (ppm)	Na ⁺	0.5
	K ⁺	0.0
	Cl ⁻	0.1

Typical properties are average data and should not be used as or to develop product specifications.

⁽¹⁾Laser lash analysis ⁽²⁾Hot wire method ⁽³⁾JIS K 2220

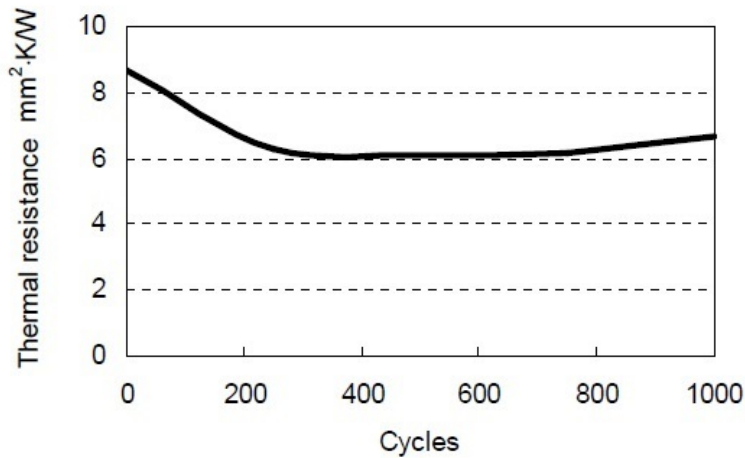
THERMAL RESISTANCE AND BLT



Note: Test data. Actual results may vary.

RELIABILITY DATA

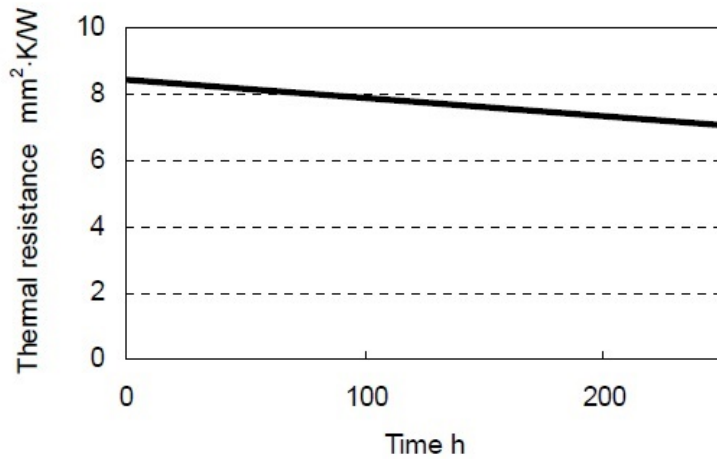
THERMAL SHOCK RELIABILITY



Test method: Sandwich material between 10mmx10mm silicon die and AL, and apply 130kPa pressure. Cycle -55 to 125°C with dwell time of 10 minutes at each extreme and measure thermal resistance using the laser flash method.

Note: Test data. Actual test results may vary.

HIGH TEMPERATURE, HIGH HUMIDITY RELIABILITY



Test method: Sandwich material between 10mmx10mm silicon die and AL, and apply 130kPa pressure. Expose to high temperature and humidity (85°C, 85%RH) and measure thermal resistance using the laser flash method.

Note: Test data. Actual results may vary.

Patent Status

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For literature and technical assistance, visit our website at: www.momentive.com

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