

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

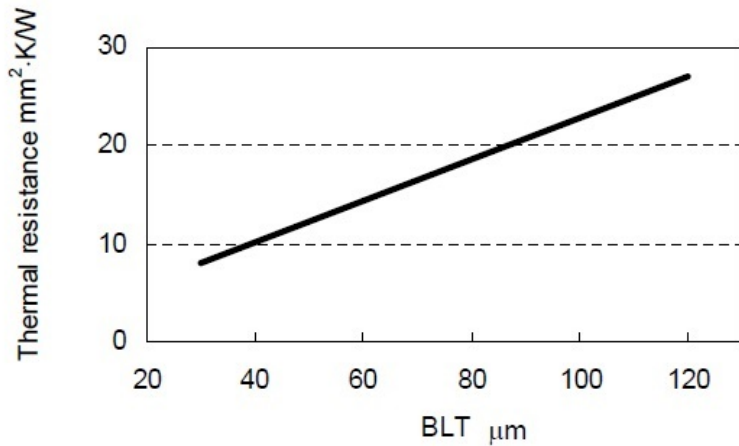
Typical Physical Properties

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

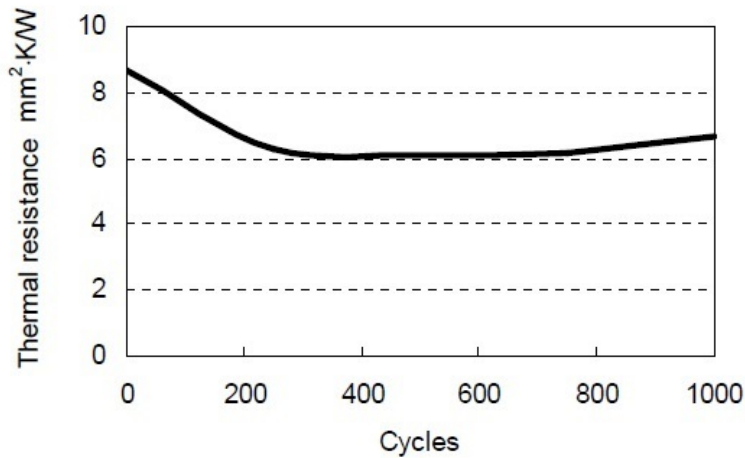
THERMAL RESISTANCE AND BLT



Note: Test data. Actual results may vary.

RELIABILITY DATA

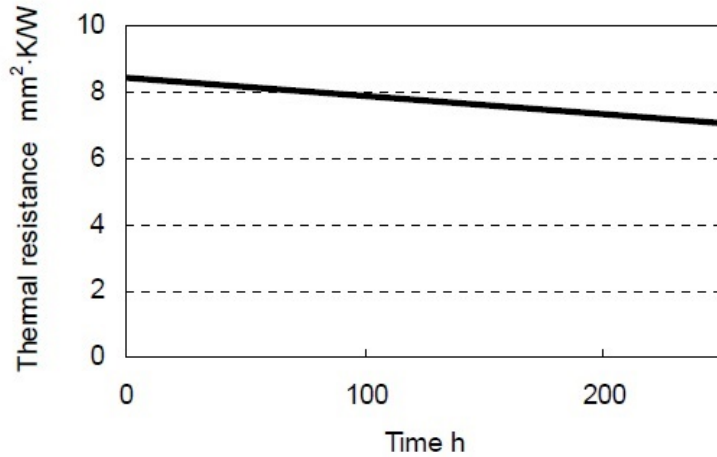
THERMAL SHOCK RELIABILITY



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

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

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