



# STYCAST<sup>®</sup> TC 4

## Thermally Conductive Silicone Grease

Key Feature:	Benefit:
<ul style="list-style-type: none"> <li>High thermal conductivity</li> </ul>	<ul style="list-style-type: none"> <li>Provides a conductive heat path</li> </ul>
<ul style="list-style-type: none"> <li>Does not harden</li> </ul>	<ul style="list-style-type: none"> <li>Components may be removed and replaced</li> </ul>
<ul style="list-style-type: none"> <li>Good electrical insulation properties</li> </ul>	<ul style="list-style-type: none"> <li>Can be used in high voltage applications</li> </ul>

### Instructions For Use:

Thoroughly read the information concerning health and safety contained in this bulletin before using. Observe all precautionary statements that appear on the product label and/or contained in individual Material Safety Data Sheets (MSDS).

Although STYCAST TC 4 does not normally settle in the container, storage for long periods of time at elevated temperatures may result in slight separation of the fillers from the silicone oil. If this condition is seen to exist, the fillers may be easily redispersed by hand or mechanical mixing.

In order to obtain the optimal thermal conductivity of STYCAST TC 4, any entrained air should be removed from the product in a vacuum chamber. When used in thin films, the removal of entrained air may not be necessary.

STYCAST TC 4 may be dispensed from syringes, cartridges, automatic dispensing equipment or other similar devices. Thin films are conveniently applied with a small stiff brush or squeegee. Excess is squeezed out when surfaces are mated. Keep film thickness to a minimum.

### Product Description:

STYCAST TC 4 is a thermally conductive, silicone thermal grease. It features high thermal conductivity and good electrical insulation properties. STYCAST TC 4 will not harden even on long exposure to elevated temperatures so that components can easily be removed and replaced.

### Applications:

STYCAST TC 4 is designed as a thermal grease to conduct heat between heat generating components and heat dissipating structures. It has been used for semiconductor devices to heat sinks, power resistors to a chassis, thermostats to mounting surfaces and thermoelectric devices to radiators.

### Properties of Material As Supplied:

Property	Test Method	Unit	Value
Chemical Type			Silicone grease
Appearance	Visual		White paste
Density	ASTM-D-792	g/cm <sup>3</sup>	2.20

### Properties of Material After Application:

Property	Test Method	Unit	Value
Thermal Conductivity	ASTM-D-2214	W/m.K Btu-in/hr-ft <sup>2</sup> -°F	1.5 11
Temperature Range of Use		°C	-40 to +200
Dielectric Strength	ASTM-D-149	kV/mm V/mil	19.7 500
Volume Resistivity @ 25°C	ASTM-D-257	Ohm-cm	10 <sup>13</sup>
Outgassing <sup>(1)</sup>	ASTM-E-595		
TML		%	0.54
CVCN		%	0.05

<sup>(1)</sup> per NASA Reference Publication 1124.

**Storage and Handling:**

The shelf life of STYCAST TC 4 is 12 months at 25°C. For best results, store in original, tightly covered containers. Storage in cool, clean and dry areas is recommended. Usable shelf life may vary depending on method of application and storage conditions.

**Health and Safety:**

The STYCAST TC 4, like most industrial compounds, possesses the ability to cause skin and eye irritation upon contact. Handling this product at elevated temperatures may also generate vapors irritating to the respiratory system.

Good industrial hygiene and safety practices should be followed when handling this product. Proper eye protection and appropriate chemical resistant clothing should be worn to minimize direct contact. Consult the Material Safety Data Sheet (MSDS) for detailed recommendations on the use of engineering controls and personal protective equipment.

*This information is only a brief summary of the available safety and health data. Thoroughly review the MSDS for more complete information before using this product.*

**Attention Specification Writers:**

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