

LOCTITE TC4

Formerly Stycast TC4

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PRODUCT DESCRIPTION

LOCTITE TC4 provides the following product characteristics:

Technology	Silicone grease
Appearance	White paste
Product Benefits	<ul style="list-style-type: none"> • High thermal conductivity • High insulation resistance • High dielectric strength
Application	Thermal management
Typical Applications	Heat sinks in semiconductor devices, Thermoelectric devices in radiators, Thermostats in mounting surfaces, Power resistors on chassis
Operating Temperature	-40 to +200 °C

LOCTITE TC4 is recommended for high-temperature heat transfer in normal applications. It is used to provide a conductive heat path between heat generating electronic components and heat dissipating structures. This material retains its paste-like consistency, and will not harden, after long exposure to elevated temperatures.

TYPICAL PROPERTIES

Density, g/cm ³	2.35
Shelf Life @ 18 to 25°C, months	12

TYPICAL PROPERTIES AFTER APPLICATION

Physical Properties:

Hardness, Shore A	20 to 25
Thermal Conductivity, W/mk	1.5

Electrical Properties:

Dielectric Strength, kV/mm	19.7
Dielectric Strength, V/mil	500
Volume Resistivity, ohms-cm	1×10 ¹³

DIRECTIONS FOR USE

1. For best results parts to be covered should be clean and free of oil and debris.
2. LOCTITE TC4 may be dispensed from syringes, cartridges, automatic dispensing equipment or other similar devices.
3. Application of LOCTITE TC4 is made with a small, stiff brush.
4. Squeeze out excess material when surfaces are mated. Keep film thickness to a minimum. Mating surfaces are lubricated and also protected from corrosion by the compound.
5. Storage for long periods of time at elevated temperatures may result in slight separation of the conductive fillers from the silicone oil. If this condition is seen to exist, the fillers may be easily redispersed by hand or mechanical mixing.

6. In order to obtain the optimal thermal conductivity of LOCTITE TC4, any entrained air should be removed in a vacuum chamber. In thin films, this is generally unnecessary.

Outgassing

TML	ASTM-E-595	%	0.54
CVCM	ASTM-E-595	%	0.05

Outgassing per NASA Reference Publication 1124.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling. Shelf life is 12 months at optimal storage temperature. Usable shelf life may vary depending on method of application and storage conditions.

Optimal Storage : 18 to 25 °C

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

