

LOCTITE TC 8M

June 2014

PRODUCT DESCRIPTION

LOCTITE TC 8M provides the following product characteristics:

Technology	Silicone grease
Appearance	white
Product Benefits	• High thermal conductivity • High electrical insulation • High dielectric strength
Application	Thermal management
Typical Applications	• Heat sinks in semiconductor devices • Thermostats in thermoelectric devices • Radiators and mounting surfaces • Power resistors • Chassis
Operating Temperature	-40 to +200 °C

LOCTITE TC 8M 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

Viscosity @ 25 °C, mPa·s (cP):

Speed 0.5 rpm	1,300
Speed 5 rpm	330
Density, g/cm ³	2.5
Fineness, µm	<50
Shelf Life @ 18 to 25°C, days	365

TYPICAL PROPERTIES AFTER APPLICATION

Physical Properties

Thermal Conductivity, W/(m·K)	1.5
Weight Loss, 24 hours @ 100°C, %	0.2

Electrical Properties

Dielectric Strength, kV/mm	19
Volume Resistivity, ohms-cm	1×10 ¹⁴

GENERAL INFORMATION

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

DIRECTIONS FOR USE

1. For best results parts to be covered should be clean and free of oil and debris.
2. LOCTITE TC 8M may be dispensed from syringes, cartridges, automatic dispensing equipment or other similar devices.
3. Thin films are conveniently applied with a stiff brush or squeegee.

4. 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.

5. In order to obtain the optimal thermal conductivity of LOCTITE TC 8M, any entrained air should be removed in a vacuum chamber. In thin films, this is generally unnecessary.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

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.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} = \text{N/mm}^2$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

Disclaimer

Note:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of

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Reference 0.1