

# 8349TFM



## Thermal Adhesive

8349TFM is a 2-part, flame retardant, thermally conductive epoxy adhesive. It is a dark grey, smooth, thixotropic paste that cures to form a hard, durable polymer that is thermally conductive, yet electrically insulating.

This thermal adhesive is most often used to bond heatsinks to CPUs, LEDs and other electronics components.

For a shorter working time, use 8329TFF. For a longer working time, use 8329TFS.



## Features and Benefits

- High thermal conductivity
- Flame retardant—meet UL 94V-0
- 1:1 mix ratio
- High dimensional stability
- Provides strong electrical insulation
- Excellent compressive and tensile strength
- Bonds well to a wide variety of substances
- Strong resistance to humidity, salt water, mild bases, and aliphatic hydrocarbons
- SVHC-free

## Available Packaging

| Cat. No.     | Packaging      | Net Vol. | Net Wt. |
|--------------|----------------|----------|---------|
| 8349TFM-25ML | Dual Syringe   | 25 mL    | 40.6 g  |
| 8349TFM-50ML | Dual Cartridge | 46 mL    | 74.8 g  |

## Contact Information

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## Cured Properties

|                                        |                                             |
|----------------------------------------|---------------------------------------------|
| Resistivity                            | $6.5 \times 10^{12} \Omega \cdot \text{cm}$ |
| Hardness                               | 92 D                                        |
| Tensile Strength                       | 25 N/mm <sup>2</sup>                        |
| Compressive Strength                   | 115 N/mm <sup>2</sup>                       |
| Lap Shear (stainless steel)            | 6.7 N/mm <sup>2</sup>                       |
| (aluminum)                             | 4.4 N/mm <sup>2</sup>                       |
| Glass Transition Temperature ( $T_g$ ) | 80 °C                                       |
| CTE Prior $T_g$                        | 20 ppm/°C                                   |
| CTE After $T_g$                        | 120 ppm/°C                                  |
| Thermal Conductivity @ 25 °C           | 0.9 W/(m·K)                                 |
| Service Temperature Range              | -65–120 °C                                  |
| Max. Intermittent Temperature          | 200 °C                                      |

## Usage Parameters

|                     |                |
|---------------------|----------------|
| Working Time        | 20 min         |
| Service Cure        | 90 min @ 22 °C |
| Mix Ratio by Volume | 1:1            |
| Mix Ratio by Weight | 1:1            |

## Uncured Properties

|               |           |
|---------------|-----------|
| Mixed Density | 1.63 g/mL |
| Shelf Life    | 3 y       |

## Application Instructions

Read the product SDS and Application Guide for more detailed instructions before using this product (downloadable at [www.mgchemicals.com](http://www.mgchemicals.com)).

## Recommended Preparation

Clean the substrate with Isopropyl Alcohol, MG #824, so the surface is free of oils, dust, and other residues.

## Syringe or Cartridge

1. Twist and remove the cap from the syringe or cartridge. Do not discard cap.
2. Dispense a small amount to ensure even flow of both parts. A manual or pneumatic dispensing gun is required for a 50 mL cartridge.
3. (Optional) Attach a static mixer.
  - a. Dispense and discard 3 to 5 mL of the product to ensure a homogeneous mixture.
  - b. After use, dispose of static mixer.
4. Without a static mixer, dispense material on a mixing surface or container, and thoroughly mix parts A and B together.
5. To stop the flow, pull back on the plunger.
6. Clean nozzle to prevent contamination and material buildup.
7. Re-place the cap on the syringe or cartridge.

## Dispensing Accessories

Consult the table below for accessory selection. See the Dispensing Accessories Application Guide for usage instructions.

| Cat. No.     | Dispensing Gun | Static Mixer |
|--------------|----------------|--------------|
| 8349TFM-25ML | N/A            | N/A          |
| 8349TFM-50ML | 8DG-50-1-1     | 8MT-50       |

## Cure Instructions

Allow to cure at room temperature for 16 hours, or cure the adhesive in an oven at one of these time/temperature options:

|             |            |            |
|-------------|------------|------------|
| Temperature | 65 °C      | 80 °C      |
| Time        | 20 minutes | 10 minutes |

## Storage and Handling

Store between 16 and 27 °C in a dry area, away from sunlight (see SDS). To maximize shelf life, recap product firmly when not in use.

## Disclaimer

This information is believed to be accurate. It is intended for professional end-users who have the skills required to evaluate and use the data properly. M.G. Chemicals Ltd. does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.