TECHNICAL DATA SHEET

My-T-Therm® 84

Thermally Conductive Adhesive

June 2020

METLOK PRIVATE LIMITED
(An ISO 9001 Certified Company)
W-27, M.I.D.C. Industrial Area
Kalmeshwar – 441 501, Nagpur

Product Description

My-T-Therm® 84 is a thermally conductive adhesive designed for bonding heat generating components to heat sinks. The high thermal conductivity provides excellent heat dissipation for thermally sensitive components, while the controlled strength permits field and service repair.

Special Feature:

- Good thermal conductivity
- High Strength
- Fast handling strength

Applications:

Typical applications include bonding Transformers, Transistors and other heat generating electronic components to printed circuit board assemblies or heat sinks.

Properties

My-T-Therm® 84 provides the following product characteristics:

Technology	:	Acrylic
Chemical type	:	Modified acrylic
Components	:	One component
Appearance (uncured)	:	White to off-white paste
Specific Gravity @ 25 °C	:	2.33±0.03
Viscosity @ 25±2 °C	:	High
Cure	:	Activator
Cure benefit	:	Room temperature cure
Strength	:	Medium
Service temperature	:	-50 ^{0}C to 150 ^{0}C
Application	:	Bonding

Properties of Cured Material

Physical Properties

Coefficient of Thermal Expansion, ASTM E 228	:	69×10^{-6} K^{-1}
Thermal Conductivity, ISO22007	:	1.2 W/m-K

Adhesive properties

Tensile Strength, ASTM D897, Aluminium	:	8-12 N/mm²
Lap Shear Strength, ASTM D1002, Aluminium	:	6-10 N/mm^2

Electrical Properties

Volume Resistivity, ASTM D 257	:	1.3×10^{12} Ω·cm
Surface Resistivity, ASTM D 257	:	5.1×10^{13} Ω
Dielectric Breakdown Strength, ASTM D149	:	26.7 kV/mm

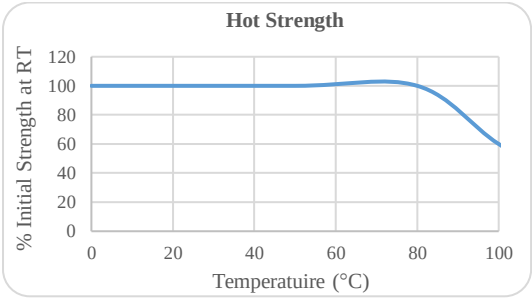
Dielectric Constant / Dissipation Factor ASTM D 150:

100-Hz	:	6.49 / 0.1
1-kHz	:	5.85 / 0.04
1-MHz	:	5.21 / 0.03

Hot Strength:

Test	:	Lap Shear Strength, ASTM D1002
Substrate	:	Aluminium
Cure	:	24 hrs @ 25±2 °C

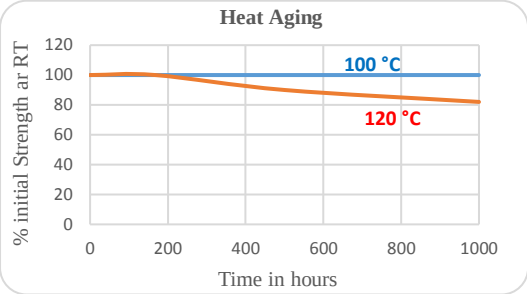
Tested at temperature indicated.



Heat Aging:

Test	:	Lap Shear Strength, ASTM D1002
Substrate	:	Aluminium
Cure	:	24 hrs @ 25±2 °C

Aged at temperature indicated and tested @ 25±2 °C.



Thermal Shock Cycle

Test Procedure	:	Lap shear test pieces cured for 24hrs at 25±2°C with Activator 1006 and then subjected to 0°C and 100ºC alternatively with zero time gap.
Substrate	:	Aluminium
Test	:	Lap Shear Test, ASTM D1002
Cure Procedure	:	24 hrs @25±2 ºC
Total Cycle time	:	1 hr.
No. of cycles	:	100 nos
% Strength retention	:	100 %

Directions for use

1. For best performance clean all surfaces (external and internal) with a cleaning solvent and allow drying. The bond surfaces should be clean and free from grease.
2. Apply/spray Metlok Activator 1001 or 1006 to the surfaces to be bonded and allow to dry
3. Apply adhesive My-T-Therm® 84 to the un-activated surface
4. To prevent the product from clogging in the nozzle, do not allow the tip to touch metal surfaces during application.
5. Assemble and tighten Secure the assembly, as required and wait for the adhesive to fixture (approximately 5 minutes) before any further handling.
6. Full cure occurs in 4 - 24 hours.
7. The successful application of this product depends on accurate dispensing on the parts to be bonded.

For Disassembly

1. Components or devices bonded with My-T-Therm® 84 can be removed while hot.
2. Method of removal/repair should be specifically determined due to the variety of components or devices bonding behavior.

Handling precautions

- For safe handling My-T-Therm® 84 must be handled in a manner as indicated in Material Safety Data Sheet (MSDS) and in compliance with relevant local regulations.
- My-T-Therm® 84 can affect certain plastics particularly thermoplastic materials or coatings. It is recommended to check all surfaces for compatibility before use.
- My-T-Therm® 84 is non-volatile and non-flammable at room temperature.

Storage

- Store Product My-T-Therm® 84 in a cool, dry location in unopened containers at a temperature between 10°C to 20°C unless otherwise labeled. Optimal storage is at the lower half of this temperature range.
- Store away from sunlight and heat sources.
- My-T-Therm® 84 will exhibit a shelf life of six month when store in above mentioned conditions.
- To prevent contamination of unused product, do not return any material to its original container. For further specific shelf life information, contact our technical service center R&D Center.

Pack Size

My-T-Therm® 84 is ideally available in 20 ml blister pack.

Note

All statements, technical information and recommendations set forth herein are based on tests which Metlok Private Limited, believes to be reliable. However, Metlok Private Limited does not guarantee their accuracy or completeness. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In no case will Metlok Private Limited be liable for direct, consequential economic or other damages.

****

METLOK PRIVATE LIMITED
(Bonding and Sealing Solutions)
An ISO 9001: 2015 Certified Company
Tel.: 07118-271543/271170/272468
Fax: 07118-272470
Visit us at: www.metlok.in