

LOCTITE® TCF 14001

April 2025

PRODUCT DESCRIPTION

LOCTITE® TCF 14001 is a thermally conductive, two-part liquid Gap Filler material.

Technology	Silicone
Appearance - Part A	Red
Appearance - Part B	Yellow
Appearance (cured)	Brown
Cure	Room temperature cure or Heat cure
Application	Thermal management, Gap filler (2K)
Mix Ratio by weight: Part A : Part B	1 : 1
Mix ratio by volume: Part A: Part B	1 : 1
Operating temperature range	-40 to 200°C
Specific benefits	<ul style="list-style-type: none"> • High thermal conductivity • Low thermal impedance • High gap deflection tolerance • Excellent ageing performance • Stable interface adhesion • Low modulus

LOCTITE® TCF 14001 is a two-component, silicone based, liquid gap filling material. The mixed material will cure at room temperature and can be accelerated with addition of heat. This liquid dispensed material offers infinite thickness variation and impart little to no stress on sensitive components during assembly. Once cured, it forms stable adhesion between interfaces.

Features and benefits

- Thermal conductivity: ≥ 14 W/m-K
- Dispensable liquid, 2K Silicone based Gap Filler
- Room temperature cure - no oven required
- High gap stability
- High sedimentation resistance and storage stability

Typical applications

- Telecom / Datacom / Power / Automotive
- Applications requiring high thermal transfer and low compressive stress

TYPICAL UNCURED PROPERTIES

LOCTITE® TCF 14001 Part A

Dispense rate, grams/minute	
EFD 30cc syringe without needle, 90psi	30
Shelf life, days	180

LOCTITE® TCF 14001 Part B

Dispense rate, grams/minute	
EFD 30cc syringe without needle, 90psi	30
Shelf life, days	180

Mixed properties

Dispense rate, grams/minute	
EFD 50cc syringe with 17 mixing, 90psi	1.7
Pot life @ 25°C, hours	3

TYPICAL CURE SCHEDULE

Cure schedule for handling stability

hours @ 25°C	24
hours @ 85°C	2

The above cure profile(s) are guideline recommendations. These cure conditions (time and temperature) may vary based on customers' experience and specific application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Hardness, Shore 00, 6 mm thick sample	62
Heat capacity, ASTM E1269, J/g-K	0.6
Density, g/cc	3.1
Siloxane content, Σ D3-D10, ppm	<100

Electrical properties

Dielectric constant, ASTM D150 @ 1000Hz	6.6
Volume resistivity, ASTM D257, ohm-meter	8.6×10^9
Dielectric strength, ASTM D149, KV/mm	13

Thermal properties

Thermal conductivity, W/m-K	
ASTM D5470, LW-9389	14.5
Thermal impedance @1mm, °C-cm ² /K	
ASTM D5470, LW-9389	0.76

GENERAL INFORMATION

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

Configurations available

LOCTITE® TCF 14001 is available in the following configurations:

Cartridges	280 cc
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Shipping conditions

Shipping conditions should be controlled between 5 to 35°C, non-frozen ambient.

Storage

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

Optimal storage: 5 to 35°C

Material removed from the package may be contaminated during use. Do not return product to the original package. 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 the specifications of this product.

Approval and certificate

Please contact Henkel representative for related approval or certificate of this product

Data ranges

The data contained herein may be reported as a typical value. Values are based on actual test data and are verified on a periodic basis.

Temperature/Humidity Ranges: 23°C / 50% RH = 23±2°C / 50±5% RH

Conversions

(°C x 1.8) + 32 = °F
 kV/mm x 25.4 = V/mil
 mm / 25.4 = inches
 µm / 25.4 = mil
 N x 0.225 = lb
 N/mm x 5.71 = lb/in
 N/mm² x 145 = psi
 MPa x 145 = psi
 N·m x 8.851 = lb·in
 N·m x 0.738 = lb·ft
 N·mm x 0.142 = oz·in
 mPa·s = cP

Disclaimer

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