

LOCTITE® BERGQUIST TLF 20000CGEL

October 2026

PRODUCT DESCRIPTION

LOCTITE® BERGQUIST TLF 20000CGEL is a thermally conductive, one-part, curable liquid gel material. It provides the following product characteristics:

Technology	1K Curable silicone thermal gel
Appearance	Grey
Cure	Heat cure
Application	Thermal management, Gel (1K)
Application method	Dispense from syringe
Product benefits	<ul style="list-style-type: none"> • High thermal conductivity • Low thermal impedance • Good dispensing efficiency • Good workability • Low BLT of ≤ 250 μm
Typical applications	<ul style="list-style-type: none"> • Opto transceivers for telecom and datacom • Automotive electronics • Consumer electronics

LOCTITE® BERGQUIST TLF 20000CGEL thermally conductive, silicone-based, 1K curable thermal gel is specially designed to meet the demanding heat dissipation requirements in high speed opto transceivers applications. Its unique formulation assures a balanced mix of high thermal conductivity, excellent dispensing efficiency, and high thermal stability.

Features and benefits

- High thermal conductivity
- Dispensable liquid, 1K curable silicone based liquid gel
- High sedimentation resistance and storage stability

Typical applications

- High speed opto transceivers for datacom
- Telecom / Automotive / Consumer electronics
- Applications requiring high thermal transfer and low compressive stress

TYPICAL PROPERTIES OF UNCURED MATERIAL

Dispense rate, EFD 30cc syringe, 90 psi, grams/minute	15.1
Bondline thickness, @ 40psi, μm	≤ 250
Thermal conductivity uncured, ASTM D5470, W/mK	≥ 20
Work life @ 25°C, hours	48
Shelf life @ -25°C to -15°C, days	270

TYPICAL CURE SCHEDULE

Recommended cure schedule

120 minutes @ 100°C or 30 minutes @ 125°C

Alternate cure schedule

120 minutes @ 85°C

The above cure profiles are guideline recommendations. These 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	77
Heat capacity, ASTM E1269, J/g-K	0.24
Density, g/cc	3.1
Siloxane content, $\Sigma\text{D3-D20}$, GC-MS analysis, ppm	≤ 100
Oil bleeding, 125°C, 2 week on paper after cure on glass, mm	≤ 2
Bonding force on Ni, Cross joint adhesion test, psi	29

Electrical properties

Volume resistivity, 1000 V DC ASTM D257, ohm-meter	6.7×10^8
Dielectric constant, Dk @ 1000 Hz	5.4
Dielectric loss Df @ 1000Hz	0.045

GENERAL INFORMATION

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

CONFIGURATIONS AVAILABLE

LOCTITE® BERGQUIST TLF 20000CGEL is supplied in:

Syringe	30 CC
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Thawing

1. Allow container to reach room temperature before use.
2. After removing from the freezer, set the syringes to stand vertically while thawing.
3. DO NOT open the container before contents reach 25°C temperature. Any moisture that collects on the thawed container should be removed prior to opening the container.
4. DO NOT re-freeze. Once thawed to 25°C, the adhesive should not be re-frozen.

Directions for use

1. Thawed material should immediately be placed on dispense equipment for use.
2. Adhesive must be completely used within the product's recommended work life.

Storage

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

Optimal storage: -25°C to -15°C. Storage below -25°C or above -15°C for long time can adversely affect product properties.

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.

Product specification

The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

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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