

# BERGQUIST LIQUI FORM TLF 3800LVO

July 2019

## PRODUCT DESCRIPTION

Thermally Conductive, One-Part, Liquid Formable Gel Material.

<b>Technology</b>	Silicone
<b>Appearance</b>	Gray paste
<b>Cure</b>	Pre-cure gel
<b>Application</b>	Thermal management, TIM (Thermal Interface Material)
<b>Operating Temperature Range</b>	-60 to 200°C
<b>UL Flammability Rating</b>	UL 94 V-0

## FEATURES AND BENEFITS

- Thermal Conductivity: 3.8 W/m-K
- Dispensable pre-cured gel
- Low volatility for silicone sensitive applications
- Stable viscosity in storage and in the application
- Excellent chemical stability and mechanical stability

BERGQUIST LIQUI FORM TLF 3800LVO is a high conductivity gel thermal interface material designed for demanding applications that require a balance between dispensability and low component stress during assembly and application.

BERGQUIST LIQUI FORM TLF 3800LVO is a one-part, highly conformable gel with thixotropic properties. The material is precured and requires no curing, mixing or refrigeration. Its unique formulation assures excellent thermal performance, low applied stress and reliable long-term performance.

BERGQUIST LIQUI FORM TLF 3800LVO is thixotropic and has a natural tack ensuring it forms around the component and stays in place in the application.

## TYPICAL APPLICATIONS

- Handheld devices
- Bare die to heat spreader lid
- Filling various gaps between heat-generating devices to heat sink and housing
- Devices requiring low assembly pressure
- High value assemblies with rework
- BGA, PGA, PPGA

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Density, ASTM D792, g/cc	3.1
Shelf Life @ 25°C, days	365

## TYPICAL PROPERTIES OF CURED MATERIAL

### Physical Properties

Dispense Rate, grams/minute <sup>(1)</sup>	25
Siloxane Content, ΣD4-D10, ASTM F2466, ppm	<100
Heat Capacity, ASTM D2169, J/g-°C	0.74
Low Shear Viscosity, ASTM D2196, Pa·s: @ 1.0 s <sup>-1</sup>	1,200
High Shear Viscosity, ASTM D5099, Pa·s: @ 100 s <sup>-1</sup>	300

### Electrical Properties

Dielectric Strength, ASTM D149, V/mm	10,000
Dielectric Constant, ASTM D150 @ 1,000Hz	8
Volume Resistivity, ASTM D257, ohm-meter	1×10 <sup>10</sup>

### Thermal Properties

Thermal Conductivity, ASTM D5470, W/(m-K)	3.8
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(1) 30cc syringe, 90 psi (621 kPa), 0.100" orifice no attachment

## GENERAL INFORMATION

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

### 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.

## CONFIGURATIONS AVAILABLE

BERGQUIST LIQUI FORM TLF 3800LVO is available with or without glass beads. Glass beads are available in 7 and 10 mil configurations.

BERGQUIST LIQUI FORM TLF 3800LVO is supplied in:

Cartridges	30cc, 150cc, 300cc, 600cc
Pail	1 gallon, 4.3gallon

**THAWING:**

1. If refrigerated, allow container to reach room temperature before use.
2. 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.

**STORAGE**

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

Optimal Storage: 25°C for a 365 day shelf life, in sealed containers with moisture barrier packaging.

**Conversions**

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$

$\text{kV/mm} \times 25.4 = \text{V/mil}$

$\text{mm} / 25.4 = \text{inches}$

$\text{N} \times 0.225 = \text{lb/F}$

$\text{N/mm} \times 5.71 = \text{lb/in}$

$\text{psi} \times 145 = \text{N/mm}^2$

$\text{MPa} = \text{N/mm}^2$

$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$

$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$

$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$

$\text{mPa}\cdot\text{s} = \text{cP}$

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