



# BERGQUIST GAP PAD TGP 12000ULM

June 2022

## PRODUCT DESCRIPTION

A 12 W/m-K, extremely soft Gap Pad with exceptional thermal performance at low pressures.

<b>Technology</b>	Silicone
<b>Appearance</b>	Gray or Red
<b>Application</b>	Thermal management, TIM (Thermal Interface Material)
<b>Operating Temperature Range, Continuous or others</b>	-60 to 200°C
<b>UL Flammability Rating</b>	UL 94 V-0

## FEATURES AND BENEFITS

- Thermal Conductivity: 12 W/m-K
- High-compliance, low compression stress
- Ultra low modulus

BERGQUIST GAP PAD TGP 12000ULM is an extremely soft gap filling material rated at a thermal conductivity of 12.0 W/m-K. It is specially formulated for high performance applications requiring low assembly stress. The material offers exceptional thermal performance at low pressures due to the unique filler package and ultra low modulus resin formulation.

BERGQUIST GAP PAD TGP 12000ULM is highly conformal to rough or irregular surfaces, allowing excellent wet-out at the interface. Protective liners are supplied on both sides allowing for ease of use. The material is available in either gray or red color to meet customer requirements.

## TYPICAL APPLICATIONS

- Telecommunications (routers, switches, base stations)
- Optical transceivers
- ASICs and DSPs

## TYPICAL PROPERTIES OF CURED MATERIAL

### Physical Properties

Hardness, Shore 000, ASTM D2240	68
Inherent Surface Tack	2
Density, ASTM D792, g/cc	3.1
Heat Capacity, ASTM E1269, J/g-K	0.7
Shelf life, days	180
Young's Modulus	kPa 103 (psi) (15)

## Electrical Properties

Volume Resistivity, ASTM D257, ohm-meter	1.5×10 <sup>12</sup>
Dielectric Constant, ASTM D150, 1,000Hz	8.4
Dielectric Breakdown Voltage: 0.04 inch sample, VAC	6,200

## Thermal Properties

Thermal Conductivity, ASTM D5470, W/(m-K)	12
-------------------------------------------	----

## GENERAL INFORMATION

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

## CONFIGURATIONS AVAILABLE

BERGQUIST GAP PAD TGP 12000ULM is available in the following configurations:

Sheet size	8" x 8"
Standard Thicknesses	0.040, 0.060, 0.080, 0.100, 0.125, 0.157 inch (1.0, 1.5, 2.0, 2.5, 3.18, 4.0 mm)

## 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 (±3), 50% RH (±10) for a 180 days shelf life. 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.



[www.orionindustries.com](http://www.orionindustries.com)

**ORION INDUSTRIES INCORPORATED**  
1 Orion Park Drive  
Ayer, MA 01432



**Conversions**

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

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

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

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

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

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

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

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

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

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

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

**Not for product specifications**

The technical data contained herein are intended as reference only. Please contact your local Henkel representative for assistance and recommendations on the specifications of this product.

**Disclaimer**

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

**In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:**

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

**In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:**

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

**In case products are delivered by Henkel Corporation, or Henkel Canada Corporation, the following disclaimer is applicable:**

The data contained herein are furnished for information only and are believed to be reliable. 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 light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

**Trademark usage**

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

