

# Gap Pad® VO Ultra Soft-B

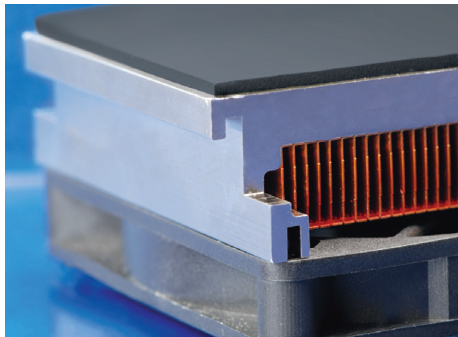
June 2013

## PRODUCT DESCRIPTION

Ultra Conformable, Thermally Conductive Material for Filling Air Gaps

## FEATURES AND BENEFITS

- Thermal conductivity: 1.0 W/m-K
- Highly conformable, low hardness
- Gel-like modulus
- Decreased strain
- Puncture, shear and tear resistant
- Electrically isolating



Gap Pad® VO Ultra Soft-B is recommended for applications that require a minimum amount of pressure on components. The viscoelastic nature of the material also gives excellent low-stress vibration dampening and shock absorbing characteristics. Gap Pad® VO Ultra Soft-B is an electrically isolating material, which allows its use in applications requiring isolation between heat sinks and high-voltage, bare-leaded devices.

*Note: To build a part number, visit our website at [www.bergquistcompany.com](http://www.bergquistcompany.com).*

## TYPICAL PROPERTIES OF GAP PAD VO ULTRA SOFT-B

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD	
Color	Black/Black	Black/Black	Visual	
Reinforcement Carrier	Fiberglass	Fiberglass	—	
Thickness (inch) / (mm)	0.020 to 0.125	0.508 to 3.175	ASTM D374	
Inherent Surface Tack (1 sided)	1	1	—	
Density (Bulk Rubber) (g/cc)	1.6	1.6	ASTM D792	
Heat Capacity (J/g-K)	1.0	1.0	ASTM E1269	
Hardness (Bulk Rubber) (Shore 00) (1)	5	5	ASTM D2240	
Young's Modulus (psi) / (kPa) (2)	8	55	ASTM D575	
Continuous Use Temp (°F) / (°C)	-76 to 392	-60 to 200	—	
<b>ELECTRICAL</b>				
Dielectric Breakdown Voltage (Vac)	6000	6000	ASTM D149	
Dielectric Constant (1 Mhz)	5.5	5.5	ASTM D150	
Volume Resistivity (Ohm-meter)	10 <sup>11</sup>	10 <sup>11</sup>	ASTM D257	
Flame Rating	V-0	V-0	U.L. 94	
<b>THERMAL</b>				
Thermal Conductivity (W/m-K)	1.0	1.0	ASTM D5470	
<b>THERMAL PERFORMANCE vs. STRAIN</b>				
	<b>Deflection (% strain)</b>	<b>10</b>	<b>20</b>	<b>30</b>
	Thermal Impedance (°C-in <sup>2</sup> /W) 0.040" (3)	1.97	1.87	1.68
	Thermal Impedance (°C-cm <sup>2</sup> /W) 1.016mm (3)	12.7	12.1	10.8

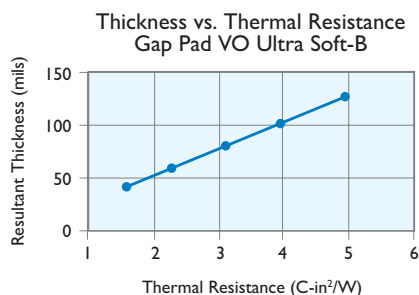
1) Thirty second delay value Shore 00 hardness scale. 2) Young's Modulus, calculated using 0.01 in/min. step rate of strain with a sample size of 0.79 inch. 3) The ASTM D5470 test fixture was used. The recorded value includes interfacial thermal resistance. These values are provided for reference only. Actual application performance is directly related to the surface roughness, flatness and pressure applied.

## TYPICAL APPLICATIONS INCLUDE

- Various IC packages
- Telecommunications
- Between any heat-generating semiconductor and a heat sink
- Automotive
- LED lighting packages
- Computers and peripherals

## CONFIGURATIONS AVAILABLE

- Sheet form and die-cut parts



PDS\_GP\_VOUS B\_June 2013

## Disclaimer

### Note:

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, Resin Technology Group, Inc., 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

Reference 0.1