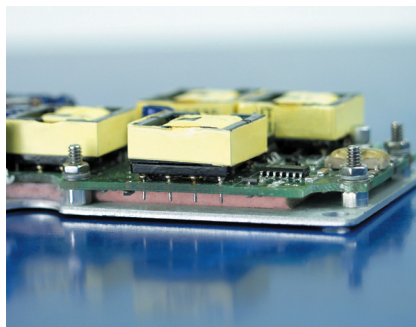


# Gap Pad® VO Ultra Soft

Ultra Conformable, Thermally Conductive Material for Filling Air Gaps

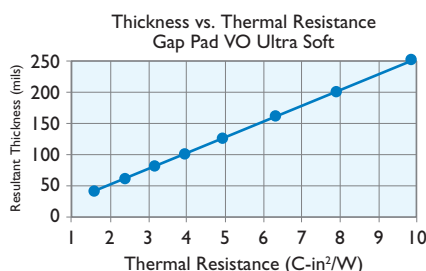
## Features and Benefits

- 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 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 is an electrically isolating material, which allows its use in applications requiring isolation between heat sinks and high-voltage, bare-leaded devices.

*Note: Resultant thickness is defined as the final gap thickness of the application.*



## TYPICAL PROPERTIES OF GAP PAD VO ULTRA SOFT

| PROPERTY                                 | IMPERIAL VALUE        | METRIC VALUE     | TEST METHOD |
|------------------------------------------|-----------------------|------------------|-------------|
| Color                                    | Mauve/Pink            | Mauve/Pink       | Visual      |
| Reinforcement Carrier                    | Fiberglass            | Fiberglass       | —           |
| Thickness (inch) / (mm)                  | 0.020 to 0.250        | 0.508 to 6.350   | 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>    |                       |                  |             |
|                                          | Deflection (% strain) |                  |             |
|                                          | 10                    | 20               | 30          |
| Thermal Impedance (°C-in²/W) 0.040" (3)  | 1.97                  | 1.87             | 1.68        |
| Thermal Impedance (°C-cm²/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.

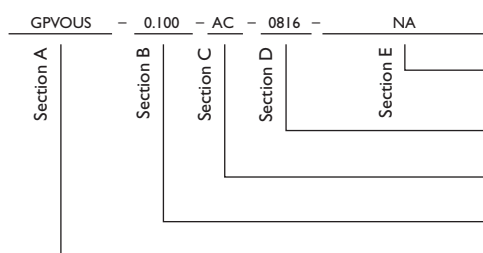
## Typical Applications:

- Various IC packages
- Thermally enhanced BGA packages
- Between any heat-generating semiconductor and a heat sink
- Computers and peripherals
- Telecommunications
- Power conversion
- Automotive
- LED lighting packages

## Configurations Available:

- Sheet form and die-cut parts

## Building a Part Number



## Standard Options

« example

NA = Selected standard option. If not selecting a standard option, insert company name, drawing number, and revision level.

0816 = Standard sheet size 8" x 16", or 00 = custom configuration

AC = Adhesive on Sil-Pad® side, natural tack on one side  
00 = No pressure sensitive adhesive, natural tack on one side

Standard thicknesses available: 0.020", 0.040", 0.060", 0.080", 0.100", 0.125", 0.160", 0.200", 0.250"

GPVOUS = Gap Pad VO Ultra Soft Material

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

Gap Pad®: U.S. Patent 5,679,457 and others



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

The Bergquist Company -  
North American Headquarters  
18930 West 78th Street  
Chanhassen, MN 55317  
Phone: 800-347-4572  
Fax: 952-835-0430

The Bergquist Company -  
European Headquarters  
Netherlands  
Phone: 31-35-5380684  
Fax: 31-35-5380295

The Bergquist Company -  
Asia Headquarters  
Hong Kong  
Phone: 852-2690-9296  
Fax: 852-2690-2344

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