MacDermid Alpha ELECTRONICS SOLUTIONS

TECHNICAL DATA SHEET

# Electrolube® GFP500NS

**Thermally Conductive, Silicone-Free Gap Filling Pad**

## DESCRIPTION

**Electrolube® GFP500NS** is a silicone-free, thermally conductive and electrically isolating gap filling pad with a high thermal conductivity of 5.0 W/m-K. Due to its flexibility and softness, the **GFP500NS** is highly suitable for applications where height differences need to be adjusted. The material easily conforms to irregular surfaces, minimizing the overall thermal impedance.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

## FEATURES AND BENEFITS

- Thermal conductivity of 5.0 W/m-K; aids rapid heat transfer over uneven surfaces
- Very soft, requires low compression force to ensure good wet-out
- Natural tack for easy processing and reduced interfacial resistance
- Available in a range of thicknesses and die-cut formats

## APPROVALS

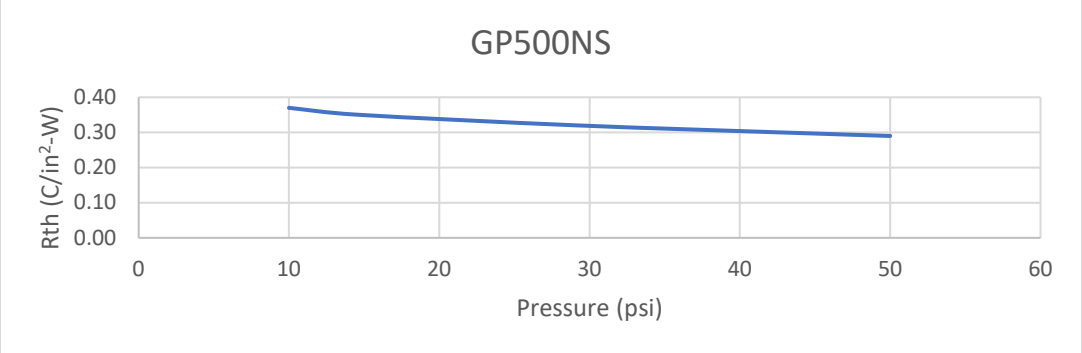
| Standard | Status |
|---|---|
| RoHS | Compliant |
| REACH | Compliant |

## PRODUCT INFORMATION

GFP500NS is typically converted into customer specific shapes and sizes.
Standard sheet size is 320mm x 320mm (12.6 x 12.6”).
Other thicknesses are available upon request.

## TYPICAL PROPERTIES

| Category | Result | Unit | Test Method |
|---|---|---|---|
| **Physical Property** | | | |
| Color | Gray | | Visual |
| Standard Thickness Range | 0.5 to 5.0<br>0.020 to 0.200 | mm<br>inch | - |
| Natural Tack | 2 sides | | - |
| Density | 3.3 | g/cc | ASTM D792 |
| Hardness | 60 | Shore 00 | ASTM D2240 |
| Operating Temperature Range | -60 to +125 | °C | - |
| Low Molecular Siloxane (D3-D20) | Non detected | % | Gas Chromatography |
| Deflection at 10 psi | 16 | % | ASTM D5470 Modified |
| Flammability Rating | Meets V-0 | | UL94 |
| **Electrical Properties** | | | |
| Dielectric Breakdown | 8 | kV/mm | ASTM D149 |
| Volume Resistivity | $>10^{10}$ | Ohm - cm | ASTM D257 |
| **Thermal Properties** | | | |
| Thermal Conductivity | 5.0 | W/m-K | ASTM D5470 |
| Thermal Impedance at 10 psi | 0.37 | °C-inch$^2$/W | ASTM D5470 |
| Thermal Impedance at 50 psi | 0.29 | °C-inch$^2$/W | ASTM D5470 |



## APPLICATION GUIDELINES

Remove protective liners before application.

## ADDITIONAL INFORMATION

**Shelf Life:** 60 Months

The product should be tested to ensure its suitability for the end application conditions.

## SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

## CONTACT INFORMATION

**www.macdermidalpha.com**

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|---|---|---|
| **North America**<br>140 Centennial Avenue<br>Piscataway, NJ 08854<br>1.800.367.5460 | **Europe**<br>Ashby Park<br>Coalfield Way<br>Ashby de la Zouch<br>Leicestershire, LE65 1JR, UK<br>44.01530.41960 | **Asia**<br>8/F., Two Sky Parc<br>51 Hung To Road<br>Kwun Tong, Kowloon,<br>Hong Kong, SAR China<br>852.2500.5365 |

Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE . Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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