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 BULLETIN 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

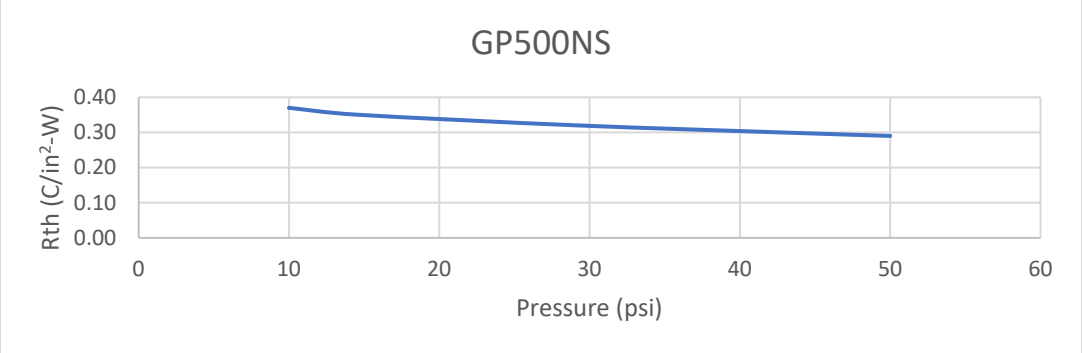
Standard	Status
RoHS	Compliant
REACH	Compliant

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 0.020 to 0.200	mm 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

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

DISCLAIMER: All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. No statement or recommendation shall constitute a representation unless set forth in an agreement signed by officers of seller and manufacturer. NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY IS MADE. The following warranty is made in lieu of such warranties and all other warranties, express, implied, or statutory. Products are warranted to be free from defects in material and workmanship at the time sold. The sole obligation of seller and manufacturer under this warranty shall be to replace any noncompliant product at the time sold. Under no circumstances shall manufacturer or seller be liable for any loss, damage or expense, direct, indirect, incidental or consequential, arising out of the inability to use the product. Notwithstanding the foregoing, if products are supplied in response to a customer request that specifies operating parameters beyond those stated above, or if products are used under conditions exceeding said parameters, the customer by acceptance or use thereof assumes all risk of product failure and of all direct, indirect, incidental and consequential damages that may result from use of the products under such conditions, and agrees to exonerate, indemnify, defend and hold harmless MacDermid, Incorporated and its affiliates therefrom. No suggestion for product use nor anything contained herein shall be construed as a recommendation to use any product in a manner that infringes any patent or other intellectual property rights, and seller and manufacturer assume no responsibility or liability for any such infringement.

© 2019 MacDermid, Inc. and its group of companies. All rights reserved. "(R)" and "TM" are registered trademarks or trademarks of MacDermid, Inc. and its group of companies in the United States and/or other countries.