EPM-2495

Low volatility thermal interface silicone elastomer

DESCRIPTION

- Two-part, white, thermally conductive silicone
- Cures with the addition of heat
- Designed to allow bond line thicknesses 50 micron to reduce thermal resistance
- 20:1 Mix Ratio (Part A: Part B)

APPLICATION

- For applications requiring low volatility under extreme operating conditions to avoid contamination in sensitive devices
- To provide heat transfer between electrical/electronic components and their heat sinks while remaining electrically insulating
- Use to adhere integrated circuit substrates, base plates, heat sinks or where grooves or other configurations require a non-flowable to limited flow material

PROPERTIES

Typical Properties	Average Result	Standard	NT-TM
Uncured:			
Appearance*	White	ASTM D2090	002
Extrusion Rate, Part A* (Performed using a SEMCO 440 nozzle with an 1/8" orifice and 90 +/-5 psi)	140 g/min	ASTM C603	033
Work Time*	3 hours	-	008
Cured: 30 minutes at 150°C (302°F)			
Durometer, Type A*	55	ASTM D2240	006
Tensile Strength*	400 psi (2.75 MPa)	ASTM D412	007
Elongation*	225%	ASTM D412	007
Tear Strength*	55 ppi (9.7 kN/m)	ASTM D624	009
Thermal Conductivity*	0.64 W/(mK) (15 x 10^{-4} cal/(cm·sec·°C))	ASTM E1530	101
Volatile Content (1 hour at 275°C)	0.3%	ASTM D2288	004
Ionic Content, Cl	< 6 ppm	-	-
Ionic Content, K	< 3 ppm	-	-

Typical Properties	Average Result	Standard	NT-TM
Ionic Content, Na	< 3 ppm	-	-

*Properties tested on a lot-to-lot basis. Do not use the properties shown in this technical profile as a basis for preparing specifications. Please contact NuSil Technology for assistance and recommendations in establishing particular specifications.

INSTRUCTIONS FOR USE

Mixing

EPM-2495 contains dense fillers that settle over time. Prior to mixing Part A and B together, thoroughly stir the Part A to ensure the fillers are homogeneously dispersed. Mix Part A and Part B in a 20:1 mix ratio by weight, just prior to use.

Vacuum Deaeration

A vacuum chamber should be used to remove the air introduced during mixing. When working with equipment at reduced pressures, ensure container and chamber are rated to withstand the supplier's recommended operational pressure. Reference Material Certification for "Work Time" to determine time between mixing and applying to application. Place mixed material into appropriate container and fill approximately one quarter of the container's total volume to allow material to rise. Slowly apply vacuum up to approximately 28 in. Hg. Hold vacuum until bubbles are no longer observed forming. Breaking the seal while pulling vacuum will allow bubbles to burst, expediting the process. It is not recommended to remove air via centrifuging.

Note: Some bonding applications may require the use of a primer. NuSil Technology's CF1-135 is recommended.

Substrate Considerations

Cures in contact with most materials, exceptions include: sulfur-cured organic rubbers, latex, chlorinated rubbers, some RTV silicones and unreacted residues of some curing agents.

Adjustable Cure Schedule

Product cures at a wide range of cure times and temperatures to accommodate different production needs. Contact NuSil Technology for details.

OPERATING TEMPERATURE

The operating temperature range of a silicone in any application is dependent on many variables, including but not limited to: temperature, time of exposure, type of atmosphere, exposure of the material's surface to the atmosphere, and mechanical stress. In addition, a material's physical properties will vary at both the high and low end of the operating temperature range. Silicone typically remains flexible at extremely low temperatures and has been known to perform at -50°C (-58°F) as well as resist breakdown at elevated temperatures up to 250°C (482°F). The user is responsible to verify performance of a material in a specific application.

Packaging	Warranty
50 Gram Kit 100 Gram Kit 250 Gram Kit 500 Gram Kit	12 Months

ROHS AND REACH COMPLIANCE

Please contact NuSil Technology's Regulatory Compliance department with any questions or for further assistance

SPECIFICATIONS

Do not use the properties shown in this technical profile as a basis for preparing specifications. Please contact NuSil Technology for assistance and recommendations in establishing particular specifications.

WARRANTY INFORMATION

The warranty period provided by NuSil Technology LLC (hereinafter "NuSil Technology") is 12 months from the date of shipment when stored below 40°C in original unopened containers. Unless NuSil Technology provides a specific written warranty of fitness for a particular use, NuSil Technology's sole warranty is that the product will meet NuSil Technology's then current specification. NuSil Technology specifically disclaims all other expressed or implied warranties, including, but not limited to, warranties of merchantability and fitness for use. The exclusive remedy and NuSil Technology's sole liability for breach of warranty is limited to refund of purchase price or

replacement of any product shown to be other than as warranted. NuSil Technology expressly disclaims any liability for incidental or consequential damages.

WARNINGS ABOUT PRODUCT SAFETY

NuSil Technology believes, to the best of its knowledge, that the information and data contained herein are accurate and reliable. The user is responsible to determine the material's suitability and safety of use. NuSil Technology cannot know each application's specific requirements and hereby notifies the user that it has not tested or determined this material's suitability or safety for use in any application. The user is responsible to adequately test and determine the safety and suitability for their application and NuSil Technology makes no warranty concerning fitness for any use or purpose. NuSil Technology has completed no testing to establish safety of use in any medical application.

NuSil Technology has tested this material only to determine if the product meets the applicable specifications. (Please contact NuSil Technology for assistance and recommendations when establishing specifications.) When considering the use of NuSil Technology products in a particular application, review the latest Material Safety Data Sheet and contact NuSil Technology with any questions about product safety information.

Do not use any chemical in a food, drug, cosmetic, or medical application or process until having determined the safety and legality of the use. The user is responsible to meet the requirements of the U.S. Food and Drug Administration (FDA) and any other regulatory agencies. Before handling any other materials mentioned in the text, the user is advised to obtain available product safety information and take the necessary steps to ensure safety of use.

PATENT / INTELLECTUAL PROPERTY WARNING

NuSil Technology disclaims any expressed or implied warranty against the infringement of any domestic or international patent/intellectual property right. NuSil Technology does not warrant the use or sale of the products described herein will not infringe the claims of any domestic or international patent/intellectual property right covering the product itself, its use in combination with other products, or its use in the operation of any process.