R-2949

Thermally conductive silicone

DESCRIPTION

- Two-part, white, thermally conductive silicone
- Cure may be heat accelerated
- 15:1 Mix Ratio (Part A: Part B)

APPLICATION

- To provide heat transfer between electrical/electronic components and their heat sinks
- Use for adhering openings in modules and housing where grooves or other configurations require a limited flow material with moderate thermal conductivity

  For applications requiring a broader operating temperature

PROPERTIES

Typical Properties	Average Result		Standard	NT-TM
Uncured:				
Appearance	White	-	D2090	002
Viscosity, Part A	75,000 cP (mPas)		D1084, D2196	001
Work Time	3.5 hours	-	-	008
Cured: 30 min at 150°C (302°F)				
Specific Gravity at 25°C (77°F)	1.4	-	ASTM D792	003
Durometer, Type A	75	-	ASTM D2240	006
Tensile Strength	275 psi (1.9 MPa)	4	ASTM D412, D882	007
Elongation	50 %	-	ASTM D412, D882	007
Tear Strength	45 ppi (8.0 kN/m)		ASTM D624	009
Thermal Conductivity	0.75 W/mk (18 x 10^{-4} cal/cm-sec-°C)		ASTM C177	101

The test data shown for this material is the average value for typical properties. All of these properties may not be tested on a lot to lot basis and cannot be used to draft specifications. Please contact NuSil® for assistance and recommendations in establishing limits for product specifications.

INSTRUCTIONS FOR USE

Mixing

Stir Part A well prior to weighing for mixing to ensure the filler is homogeneous throughout. Thoroughly mix in a ratio of 15:1 Part A to Part B.

Vacuum Deaeration

Remove air entrapped during mixing by common vacuum deaeration procedure, observing all applicable safety precautions. Slowly apply vacuum to a container rated for use and of volume at least four times that of material being deaerated. Hold vacuum until presence of air is no longer evident.

Substrate Consideration

R-2949 will cure in contact with most materials. Exceptions include butyl and chlorinated rubbers, some RTV silicones and unreacted residues of some curing agents.

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

Adjustable Cure Schedule

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

SPECIFICATIONS

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

WARRANTY INFORMATION

The warranty period provided by NuSil Technology LLC is 12 months from the date of shipment when stored below 40°C in original unopened containers. Unless NuSil provides a specific written warranty of fitness for a particular use, NuSil's sole warranty is that the product will meet NuSil's then current specification. NuSil 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'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 expressly disclaims any liability for incidental or consequential damages.

Packaging	Warranty
1 Pint kit (0.503 kg) 1 Gallon Kit (4.8 kg)	12 Months

WARNINGS ABOUT PRODUCT SAFETY

NuSil 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 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 makes no warranty concerning fitness for any use or purpose. NuSil has completed no testing to establish safety of use in any medical application.

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

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