ADVANCED ENGINEERING

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
- For use in extreme low temperature applications
- Use for adhering openings in modules and housing where grooves or other configurations require a limited flow material with moderate thermal conductivity

PROPERTIES

TYPICAL PROPERTIES	RESULT	METRIC CONV.	ASTM	NT-TM
Uncured:				
Appearance	White	-	D2090	002
Viscosity, Part A	75,000 cP	75,000 mPas	D1084, D2196	001
Work Time	3.5 hours	-	-	008
Cured : Cured 30 min @ 150°C (302°F)				
Durometer, Type A	75	-	D2240	006
Tensile Strength	275 psi	4.8 MPa	D412, D882	007
Elongation	50%	-	D412, D882	007
Tear Strength	45 ppi	7.9 kN/m	D624	009
Thermal Conductivity	0.75 W/mk	18 x 10^{-4} cal/cm-sec-°C	C177	101
Dielectric Strength	920 Volts/mil	36.2 kV/mm	D149	-
Operating Temperature Range	-178 to 500°F	-115 to 265°C	-	-

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.

Packaging

1 Pint Kit (503 g)
1 Gallon Kit (4.04 kg)

Warranty

6 Months

Note: Some bonding applications may require the use of a primer. NuSil Technology 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 Technology for details. Some cure schedules* include:

65°C (149°F)	100°C (212°F)
10 minutes	1 minute

* Cure time defined as the time required for a knife coat layer ~0.02" to be removed from a release liner

WARNINGS ABOUT PRODUCT SAFETY

NuSil Technology believes that the information and data contained herein are accurate and reliable. However, 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 Sheets 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, obtain available product safety information and take the necessary steps to ensure safety of use.

SPECIFICATIONS

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

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