

CV-2946

Thermally Conductive, Controlled Volatility Silicone

Product Profile

Description

- Two-part, white, thermally conductive silicone
- Cures with the addition of heat
- 15:1 Mix Ratio (Part A:B)

Applications

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

Typical Properties	Result	Metric Conv.	ASTM	NT-TM
Uncured:				
Appearance	White	-	D2090	002
Consistency	Paste	-	-	-
Work Time	2 hours	-	-	008
Tack-Free Time	4 hours	-	C679	005
Cured: 7 days @ ambient temp. and humidity				
Specific Gravity	1.53	-	D792	003
Durometer, Type A	75	-	D2240	006
Tensile Strength	190 psi	1.30 MPa	D412, D882	007
Elongation	30%	-	D412, D882	007
Tear Strength	45 ppi	7.9 kN/m	D624	009
Lap Shear Strength (primed w/ CF1-135)	160 psi	1.0 MPa	D1002	010
Young's Modulus	3,000 psi	20.7 MPa	-	007
Thermal Conductivity	1.25 W/mK	30 x 10 ⁻⁴ cal/cm-sec-C	C177	101
Dielectric Strength	540 volts/mil	21.3 kV/mm	D149	-
Volume Resistivity	5.3 x 10 ¹⁴ ohm-cm	-	D257	-
TGA Take-Off (1% wt. Loss, 10°C/min. in air)	350°C	-	-	-
Coefficient of Linear Thermal Expansion				
Below Tg (-100 to -50°C)	165 ppm/°C	165 µm/m/°C	D3386	-
Above Tg (-30 to 250°C)	225 ppm/°C	225 µm/m/°C	D3386	-
Collected Volatile Condensable Material (CVCM)	0.01%	-	E595	072
Total Mass Loss (TML)	0.04%	-	E595	072
Operating Temperature Range	-85°F to 482°F	-65°C to 250°C	-	-

Instructions for Use

Mixing

Thoroughly stir base prior to weighing for curing agent addition as the product separates. Mix 15 parts base to 1 part curing agent just prior to use.

Vacuum Deaeration

Remove air entrapped during mixing by common vacuum deaeration procedure, observing all safety precautions. Slowly apply full vacuum to a container rated for use and at least four times the volume of material being deaerated. Hold vacuum until bulk deaeration is complete.

Packaging

50 Gram Kit
 100 Gram Kit
 250 Gram Kit
 500 Gram Kit

Warranty

6 Months

Substrate Considerations

Cures in contact with most materials. Exceptions include butyl and chlorinated rubbers, some RTV silicone and unreacted residues of some curing agents.

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 a wide range of cure times and temperatures to accommodate different production needs. Cure schedules include, but are not limited to: 7 days @ 25°C (77°F), and 15 minutes @ 65°C (149°F). Contact NuSil Technology for details.

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.

Patent Warning

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Warranty Information

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