CV-2960

Thermally conductive, controlled volatility silicone

DESCRIPTION

- Two-part, white, flowable, thermally conductive silicone
- Cures with the addition of heat
- 10: 1 Mix Ratio (Part A: Part B)

Meets or exceeds the ASTM E 595 low outgas specifications outlined in NASA SP-R-0022A and European Space Agency PSS-014-702, with a TML of ≤1% and CVCM of ≤0.1%

APPLICATION

- For applications requiring low outgassing and minimal volatile condensables under extreme operating conditions to avoid condensation in sensitive devices
- To provide moderate 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

PROPERTIES

Typical Properties	Average Result	Standard	NT-TM
Uncured:			
Appearance	White	ASTM D2090	002
Viscosity, Part A	130,000 cP (130,000 mPas)	ASTM D1084, D2196	001
Work Time	1.5 hours	-	008
Tack-Free Time	3 hours	ASTM C679	005
Cured: 7 days minimum at ambient temperature and humidity			
Specific Gravity	1.34	ASTM D792	003
Durometer, Type A	60	ASTM D2240	006
Tensile Strength	200 psi (1.4 MPa)	ASTM D412	007
Elongation	110%	ASTM D412	007
Tear Strength	45 ppi (7.9 kN/m)	ASTM D624	009
Thermal Conductivity	0.828 W/(mK) (20 x 10^{-4} cal/(cm·sec·°C))	ASTM E1530	101

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Typical Properties	Average Result	Standard	NT-TM
Coefficient of Linear Thermal Expansion			
-100 to -50°C	180 (µm/(m°C))	ASTM D3386	-
-30 to 250°C	275 (µm/(m°C))	ASTM D3386	-
Collected Volatile Condensable Material (CVCM)	0.01%	ASTM E595	072
Total Mass Loss (TML)	0.05%	ASTM E595	072

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

Thoroughly stir Part A prior to weighing for Part B addition as the product separates. Mix Part A and Part B in a 10:1 mix ratio by weight, 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.

Inhibition Concerns

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

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

Adjustable Cure Schedule

Product cures at a wide range of temperatures and cure times to accommodate different production needs. Contact NuSil 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 (0.051 kg) 100 Gram Kit (0.101 kg) 250 Gram Kit (0.252 kg) 500 Gram Kit (0.505 kg)	12 Months

ROHS AND REACH COMPLIANCE

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

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.

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.

PATENT / INTELLECTUAL PROPERTY WARNING

NuSil disclaims any expressed or implied warranty against the infringement of any domestic or international patent/intellectual property right. NuSil 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.

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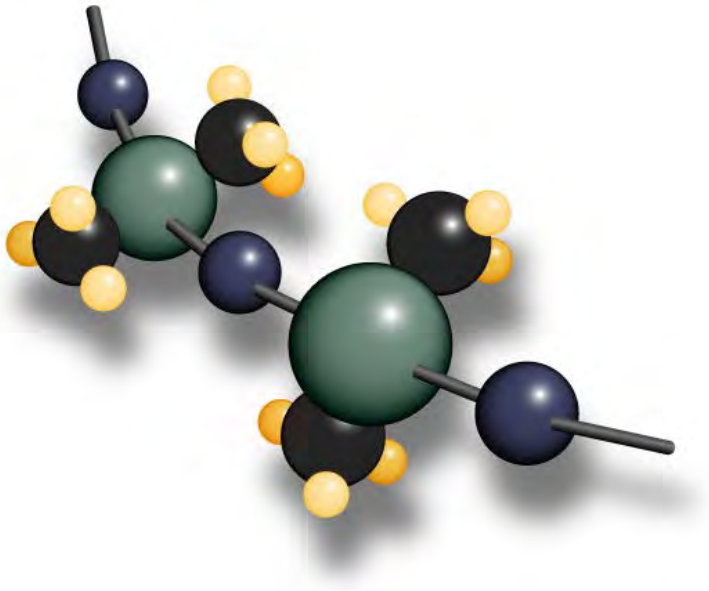

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