

# CV-2646

## Controlled volatility electrically conductive RTV silicone

### DESCRIPTION

- Two-part, tan-colored electrically conductive RTV silicone
- 100:0.5 Mix Ratio (Base: Curing Agent)

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  $\leq 1\%$  and CVCM of  $\leq 0.1\%$

### APPLICATION

- For applications requiring low outgassing and minimal volatile condensables under extreme operating conditions to avoid condensation in sensitive devices
- Use for RFI and EMI shielding in electrical and space applications
- Use to adhere covers onto housings or for any application where grooves and other configurations require a non-flowable to limited flow material
- For applications requiring a broader operating temperature range

### PROPERTIES

Typical Properties	Average Result	Standard	NT-TM
<b>Uncured:</b>			
Appearance	Tan	ASTM D2090	002
Work Time	3.5 hours	-	008
<b>Cured: 10 days minimum at ambient temperature and humidity</b>			
Appearance	Tan, Elastomer	ASTM D2090	002
Specific Gravity	3.86	ASTM D792	003
Durometer, Type A	80	ASTM D2240	006
Tensile Strength	400 psi (2.8 MPa)	ASTM D412	007
Elongation	90%	ASTM D412	007
Tear Strength	60 ppi (10.5 kN/m)	ASTM D624	009
Lap Shear Strength (primed w/ SP-120)	325 psi (2.2 MPa)	ASTM D1002	010
Volume Resistivity	0.007 ohm-cm	ASTM D257, D4496	040
Thermal Conductivity	1.0 W/(mK) ( $24 \times 10^{-4}$ cal/(cm·sec·°C))	ASTM E1530	101

Typical Properties	Average Result	Standard	NT-TM
Coefficient of Linear Thermal Expansion			
-150°C to -115°C	45 (µm/(m°C))	ASTM D3386	-
-95°C to 250°C	185 (µm/(m°C))	ASTM D3386	-
Collected Volatile Condensable Material (CVCM)	0.02%	ASTM E595	072
Total Mass Loss (TML)	0.20%	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 base prior to weighing for curing agent addition as the product separates. Mix 100 parts base to 0.5 parts curing agent by weight, just prior to use.

Caution: Curing agent may cause skin irritation. In case of eye contact, irrigate with water immediately and seek medical attention. (Standard curing agent is dibutyl tin dilaurate.)

### Vacuum Deaeration

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

Note: Some bonding applications may require the use of a primer. NuSil SP-120 silicone primer is recommended.

## 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. This type of silicone typically remains flexible at extremely low temperatures and has been known to perform at -120°C (-248°F) as well as resist breakdown at elevated temperatures up to 300°C (572°F). The user is

### Packaging

50 Gram Kit (0.051 kg)  
100 Gram Kit (0.1025 kg)  
250 Gram Kit (0.2555 kg)  
500 Gram Kit (0.512 kg)

### Warranty

6 Months

responsible to verify performance of a material in a specific application.

## 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 6 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

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