

# Polymer Systems Technology Limited

UK & Ireland Distributor



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# CV3-2646

Controlled Volatility Electrically Conductive RTV Silicone

## Product Profile

### Description

- Two-part, tan-colored electrically conductive RTV silicone
- Based on a diphenyl dimethyl silicone copolymer with a broad temperature range
- 100:0.5 Mix Ratio (Base: Curing Agent)

### Applications

- 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 an operating temperature range of -115°C to 260°C (-178°F to 500°F)

Typical Properties	Result	Metric Conv.	ASTM	NT-TM
<b>Uncured:</b>				
Appearance	Tan	-	D2090	002
Consistency	Paste	-	-	-
Work Time	4 hours	-	-	008
<b>Cured:</b> 10 days minimum@ ambient temp. and humidity				
Appearance	Tan, elastomer	-	D2090	002
Specific Gravity	3.30 - 4.10	-	D792	003
Durometer, Type A	70	-	D2240	006
Tensile Strength	350 psi	2.4 MPa	D412	007
Elongation	70% Minimum	-	D412	007
Tear Strength	50 ppi	8.8 N/mm	D624	009
Lap Shear Strength (primed w/ SP-120)	300 psi	2.1 MPa	D1002	010
Young's Modulus	950 psi	6.6 MPa	-	-
Volume Resistivity	0.005 ohm-cm	-	D257, D4496	040
Thermal Conductivity	1.0 W/m-k	2.4 x 10 <sup>-3</sup> cal/cm-sec-°C	E1530	101
Coefficient of Linear Thermal Expansion				
Below Tg (-150° to -115°C)	45 ppm/°C	45 µm/m/°C	D3386	-
Above Tg (-95°C to 250°C)	185 ppm/°C	185 µm/m/°C	D3386	-
Dynamic Mechanical Analysis (DMA)	See attached graph		D4065	-
Collected Volatile Condensable Material (CVCM)	0.02%	-	E595	072
Total Mass Loss (TML)	0.1%	-	E595	072

### 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 catalyst 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 catalyst is dibutyl tin dilaurate.)

#### 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.

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

#### Packaging

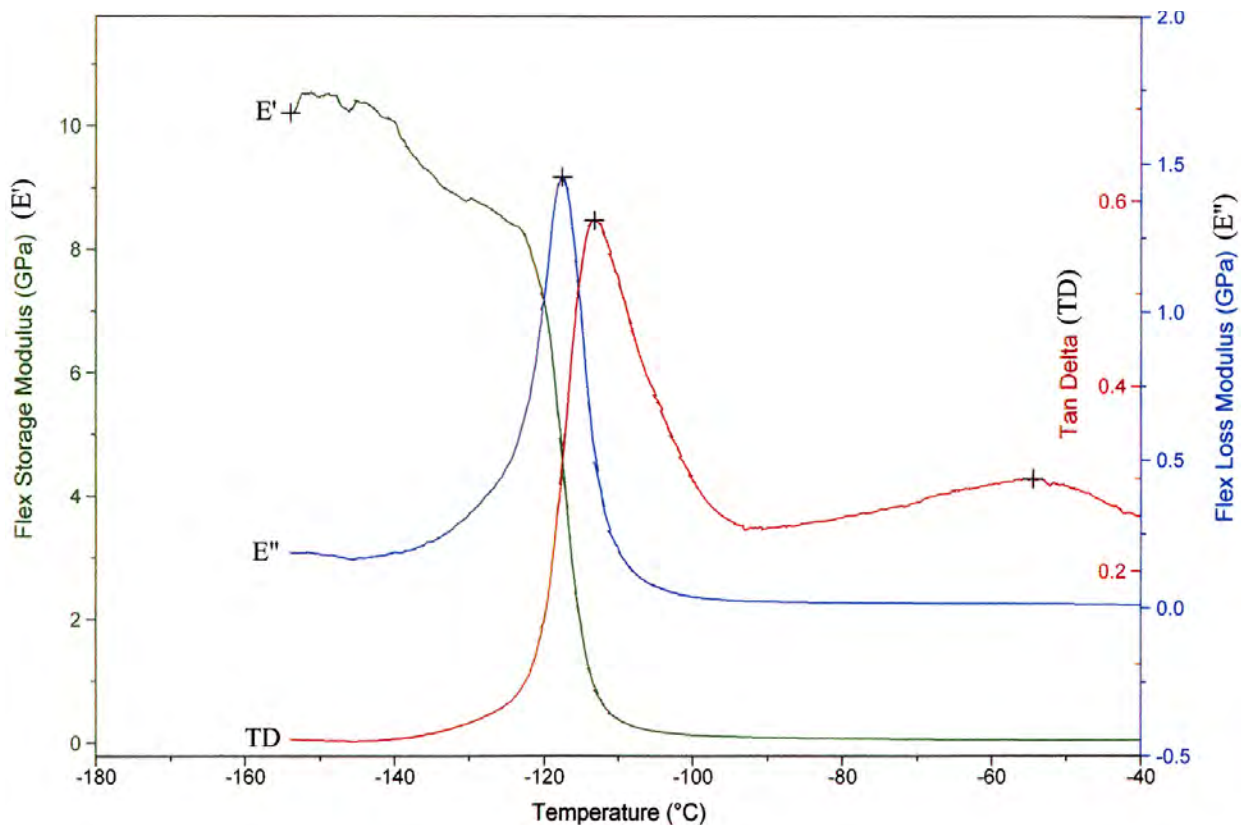
50 Gram Kit  
 100 Gram Kit  
 250 Gram Kit  
 500 Gram Kit

#### Warranty

6 Months

## Dynamic Mechanical Analysis (DMA) ASTM D4065

	Tg	Initial E'	Final E' (Gpa)	Tan Delta above Tg
CV3-2646	-120°C	10.0 Gpa	0.004 Gpa	0.3 - 0.7



### 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**

NuSil Technology's warranty period is 6 months from the date of shipment when stored below 40°C in original unopened containers. Unless NuSil Technology provides a specific written warranty of fitness for a particular use, NuSil Technology's sole warranty is that the product will meet NuSil Technology's then current specification. NuSil Technology specifically disclaims any other expressed or implied warranty, including warranties of merchantability and fitness for use. The exclusive remedy and NuSil Technology'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 Technology expressly disclaims any liability for incidental or consequential damages.