

CV-2568

Controlled volatility RTV silicone

DESCRIPTION

- A low density, two-part, red, thixotropic 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
- As a bonding, sealing, or potting material in electronic and space applications
- Provides radiation resistance, low thermal conductivity, oxidation stability, thermal stability and good ablative characteristics
- Especially useful to bond solar cells to solar array panels
- For applications requiring a broader operating temperature range

PROPERTIES

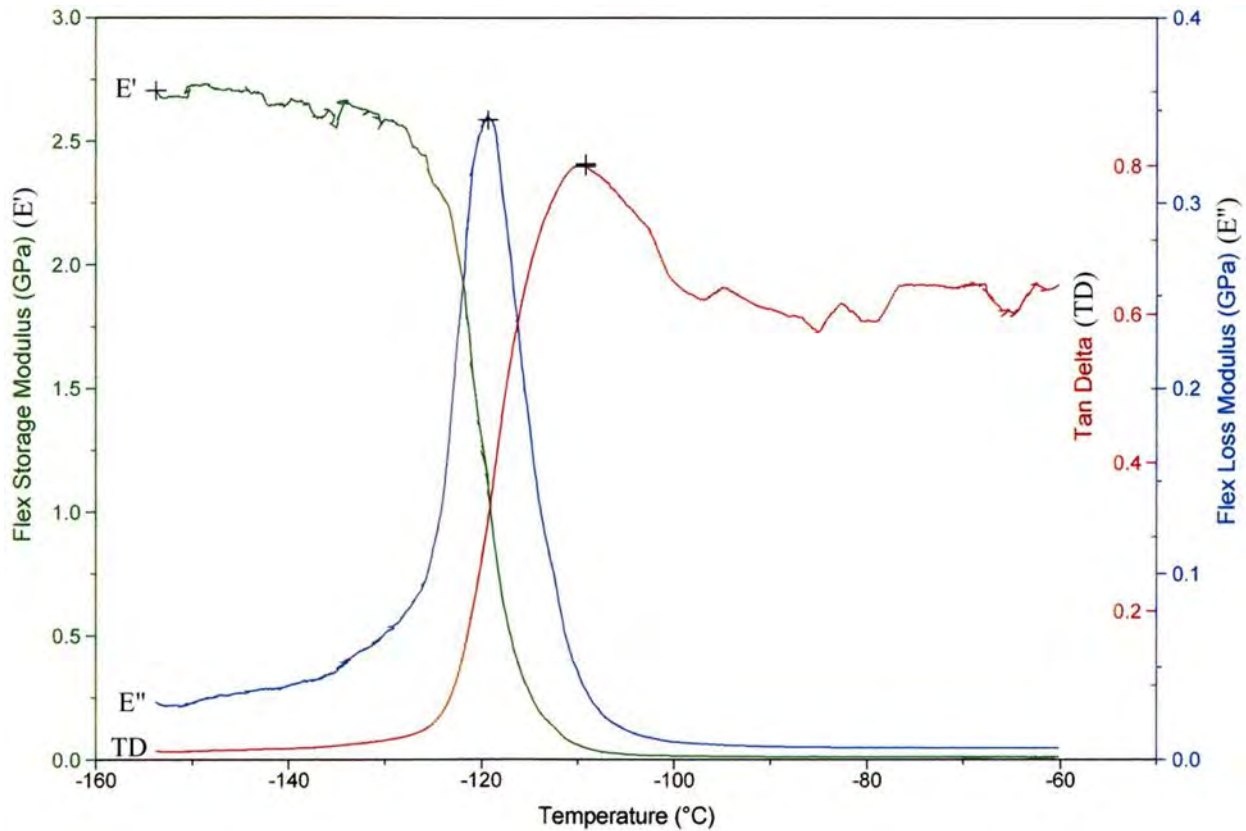
Typical Properties	Average Result	Standard	NT-TM
Uncured:			
Appearance*	Red	ASTM D2090	002
Viscosity, Base*	125,000 cP (125,000 mPas)	ASTM D1084, D2196	001
Work Time*	4 hours	-	008
Cured: 7 days minimum at ambient temperature and humidity			
Specific Gravity*	0.64	ASTM D792	003
Durometer, Type A*	50	ASTM D2240	006
Tensile Strength*	175 psi (1.2 MPa)	ASTM D412	007
Elongation*	60%	ASTM D412	007
Lap Shear Strength* (primed w/ SP-120)	100 psi (0.69 MPa)	ASTM D1002	010
Dielectric Strength	645 volts/mil (25.4 kV/mm)	ASTM D149	-
Coefficient of Linear Thermal Expansion			
Below Tg (-150°C to -115°C)	70 ppm/°C (70 $\mu\text{m}/\text{m}/^\circ\text{C}$)	ASTM D3386	-

Typical Properties	Average Result	Standard	NT-TM
Above Tg (-95°C to 250°C)	180 ppm/°C (180 μm/m/°C)	ASTM D3386	-
Dynamic Mechanical Analysis (DMA)	See Attached Graph	ASTM D4065	-
Collected Volatile Condensable Material (CVCM)*	0.04%	ASTM E595	072
Total Mass Loss (TML)*	0.33%	ASTM E595	072

* Properties tested on a lot-to-lot basis. Do not use the properties shown in this technical profile as a basis for preparing specifications Please [contact](#) NuSil Technology for assistance and recommendations in establishing particular specifications.

DYNAMIC MECHANICAL ANALYSIS (DMA) ASTM D4065

	Tg	Initial E'	Final E' (Gpa)	Tan Delta above Tg
CV-2568	-120°C	2.5 Gpa	0.007 Gpa	0.6 – 0.8



INSTRUCTIONS FOR USE

Mixing

Stir base prior to curing agent addition. Thoroughly mix 0.5% by weight of curing agent to base by weight. Use of a pipette is recommended for dispensing small amounts of the curing agent.

Caution: The curing agent may cause skin irritation. In case of eye contact, irrigate with water immediately and seek medical attention.

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 Technology SP-120 silicone primer is recommended.

Adjustable Cure Schedule

Product cures at a wide range of cure times and temperatures to accommodate different production needs. [Contact](#) NuSil Technology for details. Some cure schedules* include:

65°C (149°F)

>48 hours

100°C (212°F)

2 hours

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

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

Packaging

250 Gram Kit

Warranty

6 Months

ROHS AND REACH COMPLIANCE

Please [contact](#) NuSil Technology's Regulatory Compliance department with any questions or for further assistance

SPECIFICATIONS

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WARRANTY INFORMATION

The warranty period provided by NuSil Technology LLC (hereinafter "NuSil Technology") 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 all other expressed or implied warranties, including, but not limited to, 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.

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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 Sheet 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

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