CV16-2500

Controlled volatility silicone elastomer

DESCRIPTION

- Two-part, low viscosity clear RTV silicone
- Designed for enhanced performance in extreme low and high temperatures
- 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
- As an embedding or potting compound for environmental protection of electronic assemblies and components
- Provides protection from extremes in temperature, humidity, radiation, thermal stress and mechanical stress
- Low viscosity for applications requiring superior flow

PROPERTIES

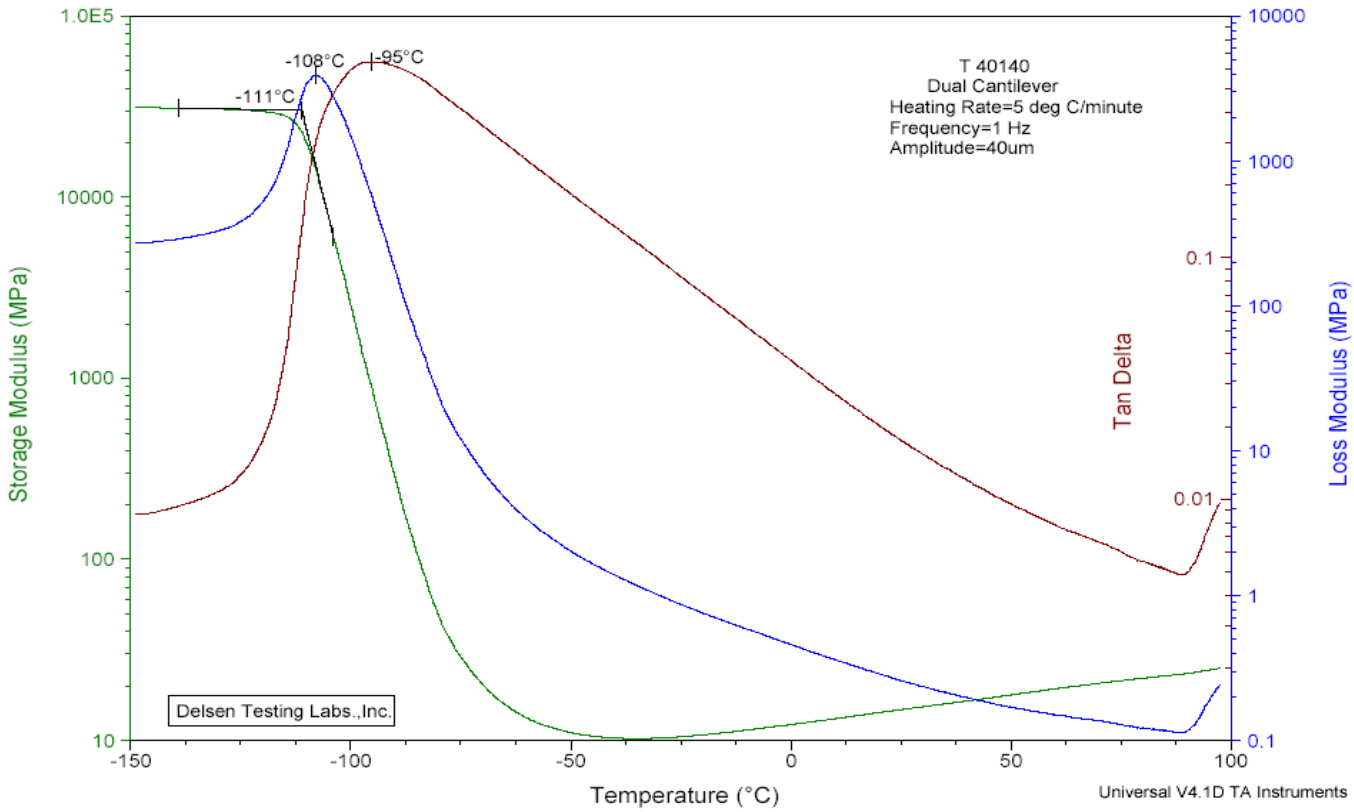
Typical Properties	Average Result	Standard	NT-TM
Uncured:			
Appearance*	Transparent	ASTM D2090	002
Viscosity, Part A *	3,600 cP (3,600 mPas)	ASTM D1084, D2196	001
Work Time*	2 hours	-	008
Cured: 4 hours at 65°C (149°F)			
Specific Gravity*	1.04	ASTM D792	003
Durometer, Type A*	40	ASTM D2240	006
Tensile Strength*	650 psi (4.5 MPa)	ASTM D412	007
Elongation*	100%	ASTM D412	007
Lap Shear Strength* (primed w/CF1-135)	200 psi (1.4 MPa)	ASTM D1002	010
Refractive Index	1.43	ASTM D1218, D1747	018
Moisture Absorption, % gain after 24 hours at 60°C, 90% R.H	0.07%	-	202
Coefficient of Linear Expansion			
Below Tg (-150° to -115°C)	10 ppm/°C (10 µm/m/°C)	-	-

Typical Properties	Average Result	Standard	NT-TM
Above Tg (-95°C to 250°C)	490 ppm/°C (490 µm/m/°C)	-	-
Dynamic Mechanical Analysis (DMA)	See Attached Graph	ASTM E1640	-
Collected Volatile Condensable Material (CVCM)*	0.01%	ASTM E595	072
Total Mass Loss (TML)*	0.05%	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 E1640

	Tg	E' at -150°C	E' at 100°C	Max and Min Tan Delta above Tg
CV16-2500	-108°C	12,100 MPa	30 MPa	0.6 – 0.004



INSTRUCTIONS FOR USE

Mixing

Thoroughly mix Part A and Part B, in a 10:1 mix ratio by weight prior to use.

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.

Inhibition Concerns

Cures in contact with most materials, exceptions include: sulfur-cured organic rubbers, latex, chlorinated rubbers, some RTV silicones 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. Contact NuSil Technology 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.

ROHS AND REACH COMPLIANCE

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

SPECIFICATIONS

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Packaging	Warranty
37 mL SxS Kit 50 Gram Kit 100 Gram Kit 500 Gram Kit	12 Months

WARRANTY INFORMATION

The warranty period provided by NuSil Technology LLC (hereinafter "NuSil Technology") is 12 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.

WARNINGS ABOUT PRODUCT SAFETY

NuSil Technology 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 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 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 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.

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