CV-1500

Controlled volatility electrically conductive RTV silicone adhesive/sealant

DESCRIPTION

- One-part, black, electrically conductive RTV silicone
- Non-corrosive and non-slumping

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
- Use for RFI and EMI shielding in electrical and space applications requiring static dissipation
- Protects from extremes in temperature, humidity, radiation, thermal stress and mechanical stress
- Well suited for form-in-place conductive gaskets and attaching heating coils to solar collector plates
- For applications requiring a broader operating temperature range

PROPERTIES

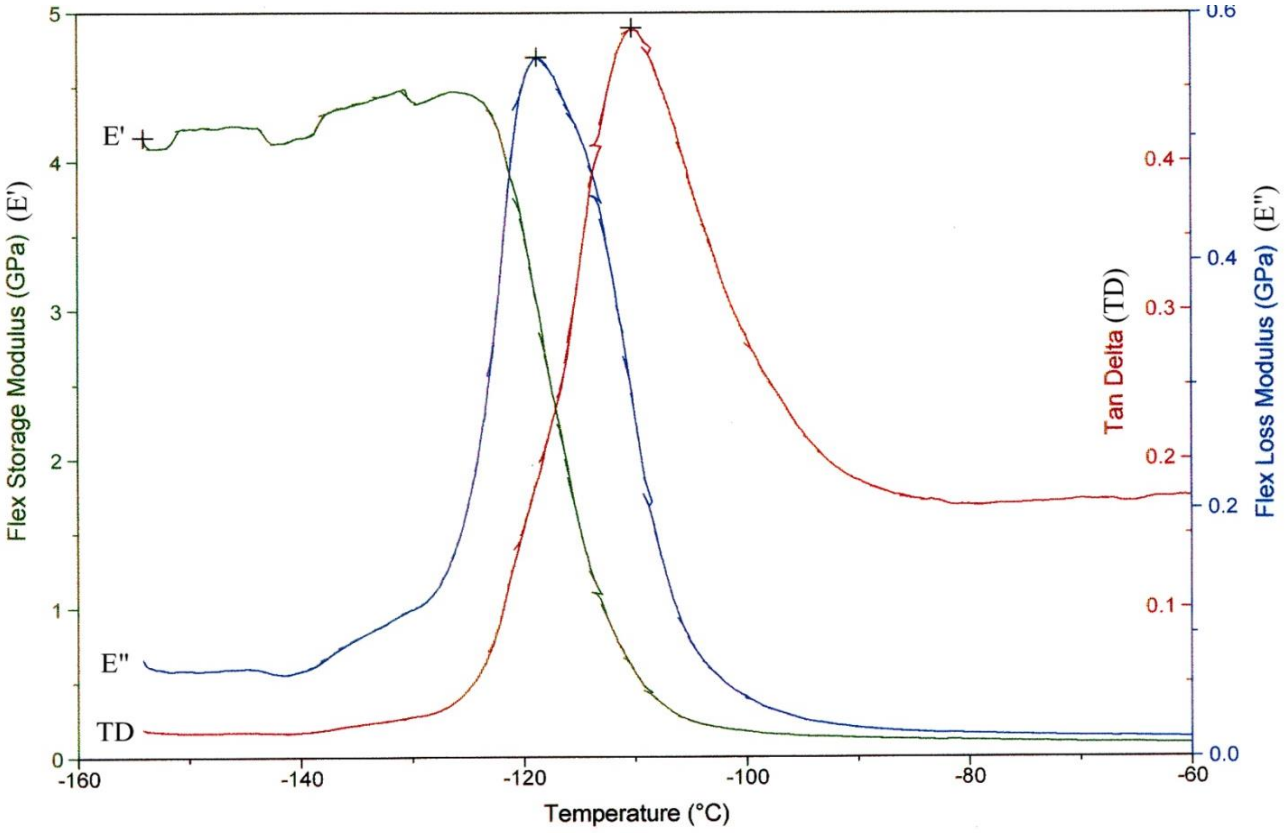
Typical Properties	Average Result	Standard	NT-TM
Uncured:			
Appearance*	Black	ASTM D2090	002
Flow* (0.5" plunge for 20 seconds)	0 inches (0 cm)	ASTM D2202	019
Tack Free Time*	10 minutes	ASTM C679	005
Cured: 7 days minimum at ambient temperature and 30% minimum humidity			
Appearance*	Black	ASTM D2090	002
Specific Gravity*	1.25	ASTM D792	003
Durometer, Type A*	80	ASTM D2240	006
Tensile Strength*	650 psi (4.5 MPa)	ASTM D412	007
Elongation*	20%	ASTM D412	007
Lap Shear Strength* (primed w/ SP-120)	325 psi (2.2 MPa)	ASTM D1002	010

Typical Properties	Average Result	Standard	NT-TM
Volume Resistivity*	3.0 ohm·cm	ASTM D257, D4496	040
Coefficient of Linear Thermal Expansion			
Below Tg (-150°C to -115°C)	65 ppm/°C (65 µm/m/°C)	ASTM D3386	-
Above Tg (-95°C to 250°C)	435 ppm/°C (435 µm/m/°C)	ASTM D3386	-
Dynamic Mechanical Analysis (DMA)	See Attached Graph	ASTM D4065	-
Collected Volatile Condensable Material (CVCM)*	0.03%	ASTM E595	072
Total Mass Loss (TML)*	0.45%	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-1500	-120°C	4.0 Gpa	0.035 Gpa	0.19 - 0.22



INSTRUCTIONS FOR USE

Apply the supplied cartridges with the use of an appropriate caulking gun.

Inhibition Concerns

Generally considered to be non-corrosive to most substrates, the oxime cure system may cause discoloration in the presence of copper or copper alloys.

Note: Some bonding application may require the use of a primer. NuSil Technology 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 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

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.

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.

Packaging	Warranty
3 Ounce Tube (89 mL) 6 Ounce Tube (177 mL)	6 months

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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