

CV-2500

Controlled volatility silicone elastomer

DESCRIPTION

- Two-part, optically clear silicone system
- 10:1 mix ratio (Part A: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 $\leq 1\%$ and CVCM of $\leq 0.1\%$

APPLICATION

- For electronic and space applications requiring low outgassing and minimal volatile condensables to avoid condensation in sensitive devices
- As an embedding or potting compound for environmental protection of electronic assemblies and components
- Provides protection from humidity, radiation, thermal stress and mechanical stress
- As an adhesive in applications such as solar cell arrays where clarity and low volatility are important
- For applications requiring a broader operating temperature range

PROPERTIES

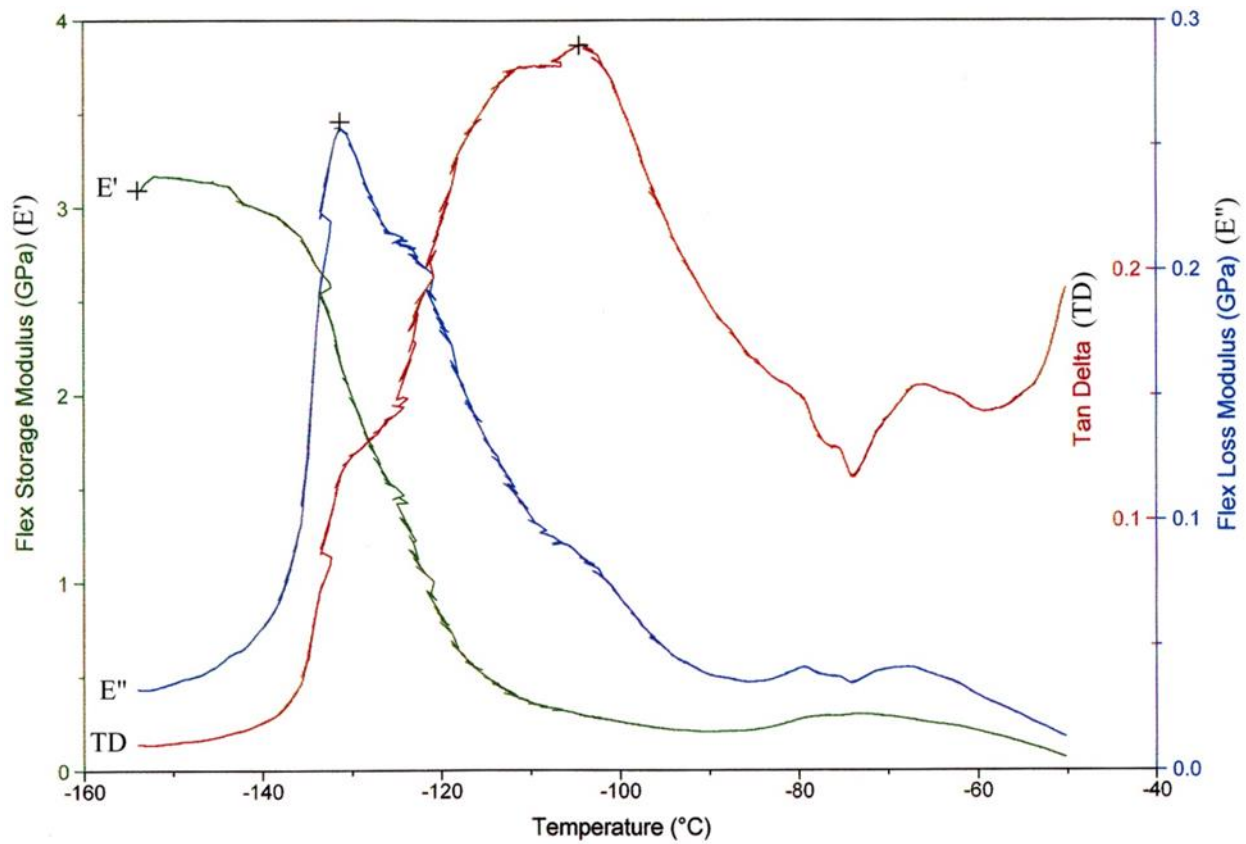
Typical Properties	Average Result	Standard	NT-TM
Uncured:			
Appearance	Transparent	ASTM D2090	002
Viscosity, Part A	8,000 cP (8,000 mPas)	ASTM D1084, D2196	001
Work Time	2 hours	-	008
Tack-Free Time	10 hours	ASTM C679	005
Cured: 15 minutes at 150°C (302°F)			
Specific Gravity	1.02	ASTM D792	003
Durometer, Type A	50	ASTM D2240	006
Tensile Strength	1,000 psi (6.9 MPa)	ASTM D412	007
Elongation	125%	ASTM D412	007
Collected Volatile Condensable Material (CVCM)*	0.01%	ASTM E595	072
Total Mass Loss (TML)*	0.05%	ASTM E595	072

Typical Properties	Average Result	Standard	NT-TM
Cured: 4 hours at 60°C (140°F)			
Lap Shear Strength* (primed w/CF1-135)	400 psi (2.8 MPa)	ASTM D1002	010

*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 D-4065-01

	Tg	Initial E'	Final E' (Gpa)	Tan Delta above Tg
CV-2500	-130°C	3.0 Gpa	0.003 Gpa	2 - 3.5



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. Some cure schedules* include:

[65°C \(149°F\)](#)

[100°C \(212°F\)](#)

20 minutes

1 minute

* 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

50 Gram Kit
100 Gram Kit
500 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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