

CV-1144-0

Controlled volatility RTV silicone oxygen protective overcoat

DESCRIPTION

- One-part silicone dispersion
- Provided as an RTV silicone dispersion in VM&P Naphtha

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 extreme low temperature, low outgassing and minimal volatile condensables under extreme operating conditions
- As a protective overcoating for electronic components and atomic oxygen resistance in space applications
- Provides radiation and thermal stress resistance
- For applications requiring a broader operating temperature range

PROPERTIES

Typical Properties	Average Result	Standard	NT-TM
Uncured:			
Appearance	Translucent	D2090	002
Non-Volatile Content	60%	D2288	004
Viscosity	240 cP (240 mPas)	D1084, D2196	001
Tack Free Time	50 minutes	C679	005
Cured: 7 days minimum at ambient temp. and humidity			
Appearance	Clear, Rubber-like Solid	D2090	002
Specific Gravity	1.00	D792	003
Refractive Index	1.43	D1218, D1747	018
Collected Volatile Condensable Material(CVCM)	0.05%	E 595	072
Total Mass Loss (TML)	0.32%	E 595	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.

INSTRUCTIONS FOR USE

Thoroughly mix for 5 minutes prior to every use, as the product separates. Apply by spraying, dipping or brushing. Thin with VM&P Naphtha (NuSil Technology R-1001) to the appropriate viscosity for spray equipment. Mix with a moisture free solvent in a closed container, preferably with a commercial paint shaker.

Caution: Consult the MSDS for CV-1144-0 prior to use, as the solvent carrier is hazardous.

Inhibition Concerns

Although 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 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 temperatures and cure times to accommodate different production needs. Contact NuSil Technology for details. Some cure schedules* include:

<u>65°C (149°F)</u>	<u>100°C (212°F)</u>
200 minutes	40 minutes

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

HEAT AND LOW-TEMPERATURE RESISTANCE

In most applications, silicone may be heated from 180 to 200°C for a year, or even up to 450°C for short periods, without any appreciable effect on physical properties. Silicone also demonstrates flexibility at extreme low temperatures, with a stiffening temperature of approximately -115°C.

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. The user is responsible to verify performance of a material in a specific application.

Packaging

100 Gram
1 Pint (400 g)

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.

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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