

CV1-2640

Controlled volatility electrically conductive RTV silicone

DESCRIPTION

- Two-part, black, electrically conductive RTV silicone
- 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 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
- Use to adhere covers onto housings or for any application where grooves and other configurations require a non-flowable to limited flow material

PROPERTIES

| Typical Properties | Average Result | Standard | NT-TM |
|--|-------------------|------------|-------|
| Uncured: | | | |
| Appearance, Part A | Black | ASTM D2090 | 002 |
| Appearance, Part B | Clear | ASTM D2090 | 002 |
| Extrusion Rate, tested 25 minutes after catalyzation (Performed using a SEMCO 440 nozzle with a 1/8" orifice and 90 +/- 5 psi air pressure) | 300 g/min | ASTM C603 | 033 |
| Extrusion Rate, tested 4 hours after catalyzation (Performed using a SEMCO 440 nozzle with a 1/8" orifice and 90 +/- 5 psi air pressure) | 150 g/min | ASTM C603 | 033 |
| Cured: 2 hours at 65°C (149°F) | | | |
| Appearance | Black, elastomer | | |
| Specific Gravity | 1.07 | ASTM D792 | 003 |
| Durometer, Type A | 40 | ASTM D2240 | 006 |
| Tensile Strength | 525 psi (3.6 MPa) | ASTM D412 | 007 |

| Typical Properties | Average Result | Standard | NT-TM |
|--|----------------|------------------|-------|
| Elongation | 225% | ASTM D412 | 007 |
| Volume Resistivity | 25 ohm-cm | ASTM D257, D4496 | 040 |
| Collected Volatile Condensable Material (CVCM) | 0.03% | ASTM E595 | 072 |
| Total Mass Loss (TML) | 0.27% | 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.

INSTRUCTIONS FOR USE

Mixing

Thoroughly mix 10 parts Part A to 1 part Part B by weight just 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.

Note: Some bonding applications may require the use of a primer. NuSil Technology SP-120 silicone primer is recommended.

Inhibition Concerns

Cures in contact with most materials. Exceptions include butyl and 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 temperatures and cure times 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

Packaging

100 Gram Kit
250 Gram Kit
500 Gram Kit

Warranty

12 Months

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

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 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

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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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