

CF1-3510

Engineering fluorosilicone elastomer

DESCRIPTION

- Two Part, red, 10:1 Mix Ratio (A: B)
- 100 mole % fluorosilicone
- Cures with heat via addition-cure chemistry

APPLICATION

- For applications requiring solvent resistance
- Designed for protection of electrical components and assemblies against shock, vibration, moisture, dust, chemicals, and other environmental hazards
- For molding parts such as O-rings, stoppers, and seals

PROPERTIES

| Typical Properties | Average Result | Standard | NT-TM |
|---|--------------------|-------------------|-------|
| Uncured: | | | |
| Appearance | Red | ASTM D2090 | 002 |
| Viscosity, Part A | 70,000 cP (mPas) | ASTM D1084, D2196 | 001 |
| Work Time | 4 hours | - | 008 |
| Cured: 30 minutes at 150°C (302°F) | | | |
| Specific Gravity | 1.44 | ASTM D792 | 003 |
| Durometer, Type A | 20 | ASTM D2240 | 006 |
| Tensile Strength | 210 psi (1.45 MPa) | ASTM D412 | 007 |
| Elongation | 135 % | ASTM D412 | 007 |

The above properties are tested on a lot-to-lot basis. Do not use as a basis for preparing specifications. Please [contact](#) NuSil Technology for assistance and recommendations in establishing particular specifications.

INSTRUCTIONS FOR USE

Mixing and Vacuum Deaeration

Thoroughly mix Part A with Part B in a 10:1 mix ratio by weight. Remove air entrapped during mixing by common vacuum deaeration procedure. Prior to deaeration, NuSil recommends verification of the work time of the material, and observation of all applicable safety precautions. Slowly apply vacuum, up to 28 inches Hg, to a container rated for use and of volume at least four times that of material being deaerated. Apply the vacuum while observing the uncured fluid for presence of bubble formation and increase vacuum slowly enough to avoid rapid foaming. Hold vacuum until presence of air is no longer evident. For more information visit www.nusil.com and review [Mixing and Deairing Addition Cure Silicones](#) in our technical resources.

Substrate Considerations

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. Epoxies with amine catalysts and solder flux are known to inhibit cures of platinum catalyzed silicones, NuSil Technology recommends taking precaution to minimize contact with said substrates. For more information visit www.nusil.com and review [Avoiding Cure Inhibition](#) in our technical resources. Some bonding applications may require the use of a primer. NuSil Technology's CF2-135 is recommended for most metallic substrates, some plastics and when cure inhibition is observed on substrate. In general, NuSil Technology's SP-120 is recommended for use with 100% Fluorosilicones. For more information visit www.nusil.com and review [Choosing a Silicone Primer / Adhesive System for Engineering Applications](#) in the technical resources.

Substrates should be free of dust, oil, and fingerprint soils. Clean substrates using suitable industrial techniques for cleaning devices substrate. If using hydrocarbon solvent cleaning (e.g. acetone, toluene), a final rinse with reagent grade isopropanol is recommended. If using aqueous detergent cleaning, multiple final rinses with de-ionized water or a single rinse with reagent grade isopropanol is recommended. Adhesion to fluoroplastic substrates is generally poor but may be improved with chemical etching or plasma etching of the substrate.

Clean-Up

Remove from surfaces by first wiping off excess uncured material with a suitable, dry, lint-free wipe and then by wiping down the surface with a lint-free wipe soaked with xylene of reagent grade isopropanol. Complete the clean-up process with a final rinse with reagent grade isopropanol. The user is responsible for compliance with all applicable regulations

Packaging

3 Ounce Kit
1 Pint Kit (555 g)
5 Gallon Kit (22.64 kg)

Warranty

12 Months

governing disposal of waste materials as indicated in the MSDS. For information on removing cured material please visit www.nusil.com and review [Silicone Removal for Electronic Rework Applications](#) in our technical resources.

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 -65°C (-85°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.

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 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.

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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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