

# R-2145

## Extremely tough, high durometer, fast-cure adhesive/sealant

### DESCRIPTION

- Two-part, gray silicone adhesive system
- Cures at room temperature or rapidly by applying heat in an oven or by a heat gun or lamp
- Does not require atmospheric moisture to cure
- No curing byproducts such as acetic acid or methyl alcohol
- Product available in easy-to-use, airless side-by-side kits that eliminate mixing and deairing difficulties
- 1:1 Mix Ratio (Part A: Part B)

### APPLICATION

- Adhesive for bonding and sealing silicones to each other and other substrates such as metals and plastics
- For rapid production or prototyping due to a rapid cure

### PROPERTIES

| Typical Properties                    | Average Result      | Standard        | NT-TM |
|---------------------------------------|---------------------|-----------------|-------|
| <b>Uncured:</b>                       |                     |                 |       |
| Appearance, Part A                    | Black               | ASTM D2090      | 002   |
| Appearance, Part B                    | White               | ASTM D2090      | 002   |
| Color, Mixed                          | Dark Gray           | -               | -     |
| Extrusion Rate, Part A                | 310 g/min           | ASTM C603       | 033   |
| Extrusion Rate, Part B                | 280 g/min           | ASTM C603       | 033   |
| Work Time                             | 15 min              | -               | 008   |
| <b>Cured: 2 hours at 65°C (149°F)</b> |                     |                 |       |
| Specific Gravity                      | 1.17                | ASTM D792       | 003   |
| Durometer, Type A                     | 45                  | ASTM D2240      | 006   |
| Tensile Strength                      | 1,050 psi (7.2 MPa) | ASTM D412, D882 | 007   |
| Elongation                            | 400%                | ASTM D412, D882 | 007   |
| Tear Strength                         | 150 ppi (26.5 N/mm) | ASTM D624       | 009   |
| Stress at 200% Strain                 | 525 psi (3.6 MPa)   | ASTM D412, D882 | 007   |

| Typical Properties           | Average Result             | Standard   | NT-TM |
|------------------------------|----------------------------|------------|-------|
| Lap Shear, unprimed          | 145 psi (1.0 MPa)          | ASTM D1002 | 010   |
| Lap Shear, primed w/ CF1-135 | 600 psi (4.1 MPa)          | ASTM D1002 | 010   |
| 180° Peel, primed w/ CF1-135 | 70 ppi (12.3 N/mm)         | ASTM D903  | 104   |
| Young's Modulus              | 300 psi (2.1 MPa)          | -          | -     |
| Dielectric Strength          | 825 Volts/mil (32.5 kV/mm) | ASTM D149  | -     |

The test data shown for this material is the average value for typical properties. All of these properties may not be tested on a lot to lot basis and cannot be used to draft specifications. Please [contact](#) NuSil® for assistance and recommendations in establishing limits for product specifications.

## INSTRUCTIONS FOR USE

### Mixing

Mix at a 1:1 mix ratio when extracted from their side-by-side kits through a static mix and dispense cartridge. Attach the disposable static mix tip to the cartridge and extrude the product directly onto the substrate.

Note: NuSil recommends discarding the first few grams of extruded material.

Can also be purchased in standard two-part kits. When using standard kits, take care to minimize air entrapped while mixing. Place the mixed product in a vacuum chamber to remove entrapped air and subsequently reduce bubble formation during curing.

### Substrate Considerations

Cures in contact with most materials common to electrical and electronic assemblies. Exceptions include: sulfur cured organic rubbers, latex, chlorinated rubbers, some RTV silicones and unreacted residues of some curing agents. Clean units being encapsulated or potted to ensure they are free of contaminants. Also clean and dry containers and dispensers being used. Prevent cure inhibition by washing all containers with clean solvent or volatilizing the contaminants by heating.

Note: Some bonding applications may require use of a primer. NuSil 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 for details.

### Packaging

50 ml SxS Kit (0.054 kg)  
 400 ml SxS Kit (0.42 kg)  
 2 Pint Kit (0.91 kg)  
 2 Gallon Kit (7.28 kg)  
 10 Gallon Kit (36.4 kg)

### Warranty

12 Months

## SPECIFICATIONS

Do not use the typical properties shown in this technical profile as a basis for preparing specifications. Please [contact](#) NuSil for assistance and recommendations in establishing limits for product specifications.

## WARRANTY INFORMATION

The warranty period provided by NuSil Technology LLC is 6 months from the date of shipment when stored below 40°C in original unopened containers. Unless NuSil provides a specific written warranty of fitness for a particular use, NuSil's sole warranty is that the product will meet NuSil's then current specification. NuSil 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'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 expressly disclaims any liability for incidental or consequential damages.

## WARNINGS ABOUT PRODUCT SAFETY

NuSil 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 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 makes no warranty concerning fitness for any use or purpose. NuSil has completed no testing to establish safety of use in any medical application.

NuSil has tested this material only to determine if the product meets the applicable specifications. (Please [contact](#) NuSil for assistance and recommendations when establishing specifications.) When considering the use of NuSil products in a particular application, review the latest Material Safety Data Sheet and [contact](#) NuSil 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.

## PATENT / INTELLECTUAL PROPERTY WARNING

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