

R31-2186

Fast-cure silicone adhesive

DESCRIPTION

- Two-part, translucent, thixotropic, high tear strength silicone system
- Cures at room temperature and rapidly with the application of heat in an oven, or by a heat gun or lamp
- Many bonding applications do not require the use of a silicone primer for suitable adhesion
- Does not require atmospheric moisture to cure
- No curing byproducts such as acetic acid or methyl alcohol
- Consistency allows product to be supplied 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
Uncured:			
Appearance*	Translucent	ASTM D2090	002
Viscosity, Part A*	82,000 cP (82,000 mPas)	ASTM D1084, D2196	001
Viscosity, Mixed*	-	ASTM D1084, D2196	001
Flow (0.375" plunge for 5 minutes)*	0.5 inches (1.3 cm)	ASTM D2202	019
Extrusion Rate, Part A*	5 g/minute	ASTM C603	033
Extrusion Rate, Part B*	20 g/minute	ASTM C603	033
Work Time*	15 minutes	-	008
Cured: 24 hours minimum at ambient temperature and humidity			
Specific Gravity*	1.12	ASTM D792	003
Durometer, Type A*	20	ASTM D2240	006

Typical Properties	Average Result	Standard	NT-TM
Tensile Strength*	1,000 psi (6.9 MPa)	ASTM D412	007
Elongation*	775%	ASTM D412	007
Tear Strength*	125 ppi (22.0 kN/m)	ASTM D624	009
Lap Shear Strength*	110 psi (0.76 MPa)	ASTM D1002	010
Young's Modulus	200 psi (1.4 kN/m)	-	-
Dielectric Strength	905 Volts/mil (35.6 kV/mm)	ASTM D149	-

*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

Mix at a 1:1 mix ratio when extracted from 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 Technology 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.

Adjustable Cure Schedule

Product cures at room temperature and a wide range of elevated temperatures and cure times to accommodate different production needs. [Contact](#) NuSil Technology for details.

Packaging

50 ml SxS Kit
 200 ml SxS Kit
 400 ml SxS Kit
 2 Pint Kit (910 g)
 2 Gallon Kit (7.28 kg)
 10 Gallon Kit (36.4 kg)

Warranty

12 Months

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. 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

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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.

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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