

R33-2186

Fast-cure silicone adhesive

DESCRIPTION

- Two-part, translucent, thixotropic, high tear strength silicone system
- Cures at room temperature or 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 products 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

- As adhesives 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
- For applications requiring an operating temperature range of -65°C to 240°C (-85 to 465°F)

PROPERTIES

Typical Properties	Average Result	Metric Conv.	Standard	NT-TM
Uncured:				
Appearance	Translucent	-	ASTM D2090	002
Viscosity, Part A	83,500 cP	83,500 mPas	ASTM D1084, D2196	001
Work Time	2 hours	-	-	008
Cured: 24 hours at ambient temperature and humidity				
Specific Gravity	1.12	-	ASTM D792	003
Durometer, Type A	20	-	ASTM D2240	006
Tensile Strength	1,000 psi	6.9 Mpa	ASTM D412	007

Typical Properties	Average Result	Metric Conv.	Standard	NT-TM
Elongation	725%	-	ASTM D412	007
Tear Strength	150 ppi	26.5 KN/m	ASTM D624	009

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

R33-2186 is mixed 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 recommends discarding the first few grams of extruded material.

R33-2186 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 Consideration

R33-2186 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 surface contaminants. Also clean and dry containers and dispensers prior to use with R33-2186. Prevent cure inhibition by washing all containers with clean solvent or volatilizing the contaminants by heating.

Adjustable Cure Schedule

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

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.

Packaging

50 ml SxS Kit (0.054 kg)
 200 ml SxS Kit (0.21 kg)
 400 ml SxS Kit (0.42 kg)
 2 Pint Kit (0.91 kg)
 10 Gallon Kit (36.4 kg)

Warranty

12 Months

WARRANTY INFORMATION

The warranty period provided by NuSil Technology LLC is 12 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.

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