R-2186

General purpose silicone elastomer

DESCRIPTION

- Two-part, translucent, pourable silicone system
- 10:1 Mix Ratio (Part A:B)
- Cures at room temperature or rapidly with heat
- High tear strength and good physical properties

APPLICATION

- To provide protection of electronic components and assemblies against shock, vibration, moisture, ozone, dust, chemicals and other environmental hazards
- Ideal for molding or use in O-rings, potting connectors, cable harness breakouts, molded high voltage terminals, seals and gaskets due to its high physical strength
- For applications requiring an operating temperature range of -65 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	83,000 cP	83,000 mPas	ASTM D1084, D2196	001
Work Time	2.5 hours	-	-	008
Cured: 15 min at 150°C (302°F)				
Specific Gravity	1.12	-	ASTM D792	003
Durometer, Type A	30	-	ASTM D2240	006
Tensile Strength	910 psi	6.3 MPa	ASTM D412	007
Elongation	450%	-	ASTM D412	007
Tear Strength	120 ppi	21.0 kN/m	ASTM D624	009
Lap Shear Strength (primed w/ CF1-135)	475 psi	3.3 MPa	ASTM D1002	010

Typical Properties	Average Result	Metric Conv.	Standard	NT-TM
Dielectric Strength	640 volts/mil	25.2 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 in a 10:1 ratio Part A to Part B, by weight. Take care to minimize air entrapment during mixing

Vacuum Deaeration

Remove air entrapped during mixing by common vacuum deaeration procedure, observing 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. Hold vacuum until presence of air is no longer evident.

Substrate Considerations

Cures in contact with most materials common to electronic assemblies. Exceptions include butyl and chlorinated rubbers, some RTV silicones and unreacted residues of some curing agents. Units being encapsulated or potted should be clean and free of surface contaminants. Containers and dispensers being used should also be clean and dry. Cure inhibition can usually be prevented by washing all containers with clean solvent or volatilizing the contaminants by heating.

Note: Some bonding applications may require the use of a primer. NuSil CF1-135 silicone primer is recommended.

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 for details. Some cure schedules* include:

65°C (149°F)	100°C (212°F)
15 minutes	2 minutes

* Cure time defined as the time required for a knife coat layer ~0.02" to be removed from a release liner

SPECIFICATIONS

Packaging	Warranty
250 ml SxS Kit (0.253 kg)	12 Months
1 Pint Kit (0.505 kg)	
1 Gallon Kit (4.04 kg)	
5 Gallon Kit (20.2 kg)	

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 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.

PATENT / INTELLECTUAL PROPERTY WARNING

NuSil disclaims any expressed or implied warranty against the infringement of any domestic or international patent/intellectual property right. NuSil does not warrant the use or sale of the products described herein will not infringe the claims of any domestic or international patent/intellectual property right covering the product itself, its use in combination with other products, or its use in the operation of any process.