CF19-2615

Optically clear potting and encapsulating silicone elastomer

DESCRIPTION

- Two-part, optically clear, solvent free, low viscosity silicone
- Cures at room temperature or rapidly with heat
- Offers good physical and electrical stability across a broad range of temperatures
- Convenient 1:1 Mix ratio

APPLICATION

- To provide protection of electronic components and assemblies against shock, vibration, moisture, ozone, dust, chemicals and other environmental hazards by potting or encapsulating
- For photonics applications such as HBLEDs, photo detectors, lasers, discrete optics and flat panel displays that require a 1.41 refractive index

PROPERTIES

Typical Properties	Average Result	Metric Conv.	Standard	NT-TM
Uncured:				
Appearance	Optically Clear	-	ASTM D2090	002
Viscosity, Part A	1,300 cP	1,300 mPas	ASTM D1084, D2196	001
Viscosity, Part B	800 cP	800 Mpas	ASTM D1084, D2196	001
Work Time	4 hours	-	-	008
Cured: 30 minutes at 150°C (302°F)				
Operating Temperature Range	-85 to 465°F	-65 to 240°C	-	-
Durometer, Type A	30	-	ASTM D2240	006
Tensile Strength	120 psi	0.9 MPa	ASTM D412, D882	007
Elongation	100 %	-	ASTM D412, D882	007
Refractive Index	1.41	-	ASTM D1747, D1218	018
Dielectric Strength	500 volts/mil	19.7 kV/mm	ASTM D149	-
Volume Resistivity	1×10^{15}	-	ASTM D257	040

INSTRUCTIONS FOR USE

Mixing

Mix in a 1:1 ratio Part A to Part B, taking care to minimize air entrapment during mixing.

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 cleaning solvent or volatilizing the contaminants by heating.

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

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.

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.

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.

Packaging	Warranty
50 ml SxS Kit 400 ml SxS Kit 2 Pint Kit (910 g) 2 Gallon Kit (7.28 kg) 10 Gallon Kit (36.4 kg)	12 Months

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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