

R-2613

Clear silicone potting elastomer

DESCRIPTION

- Two part, Clear, 10:1 Mix ratio (A:B)
- Pourable and self-leveling
- Cures at room temperature
- REACh and RoHS compliant
- Tested per UL-94 and passed V-0

APPLICATION

- Good optical clarity allows for photonic coupling and visual inspection during component assembly
- Low viscosity allows the potting of complex geometries without the entrapment of air
- Superior UV and weathering resistance for protection of outdoor electronic components
- Applications include: potting for optical sensors, components and various electronic devices

PROPERTIES

Typical Properties	Average Result	Standard	NT-TM
Uncured:			
Appearance, Mixed	Colorless	ASTM D2090	002
Viscosity, Part A	5,500 cP	ASTM D1084, D2196	001
Viscosity, Part B	125 cP	ASTM D1084, D2196	001
Mixed Viscosity	4,000 cP	ASTM D1084, D2196	001
Work Time (Pot Life)	2 hour minimum	-	008
Cured: 10 minutes at 150 °C (302 °F)			
Durometer, Type A	45	ASTM D2240	006
Tensile Strength	1,140 psi (7.9 MPa)	ASTM D412	007
Elongation	150 %	ASTM D412	007
Tested per UL-94 (4.7 mm nominal thickness)*	Passed V-0	-	-
Volume Resistivity*	4 x 10 ¹⁴ Ohm-cm	ASTM D257	153
Thermal Conductivity*	0.15 W/mK	ASTM E1530	101
Dielectric Constant, 100 Hz*	2.4	ASTM D150	354

Typical Properties	Average Result	Standard	NT-TM
Dielectric Constant, 100 kHz*	2.3	ASTM D150	354
Dissipation Factor 100 Hz*	0.0004	ASTM D150	354
Dissipation Factor 100 kHz*	0.0008	ASTM D150	354
Dielectric Strength*	660 Volts/mil (25.8 kv/mm)	ASTM D149	243
Glass Transition Temperature (Tg)*	-120 °C	ASTM D34181	260
Coefficient of Thermal Expansion (-40 °C to -250 °C)*	305 µm/m°C	ASTM E831	243
% Linear Shrink (1 hour at 90°C)*	1.5%	-	059
% Linear Shrink (1 hour at 110°C)*	2.0%	-	059
Recommended Cure Times based on 90% cured via ODR**	-	-	
T90 at 90°C	50 minutes	ASTM D2084	124
T90 at 110°C	40 minutes	-	-

*These properties NOT tested on a lot-to-lot basis. Please [contact](#) NuSil Technology for assistance and recommendations in establishing particular specifications.

**Recommended cure times are based on the testing performed via CSR (Controlled Stress Rheometer) where T90 is considered 90% of full cure. However the cure times can be affected by multiple factors, including, but not limited to, quantity of silicone used, time to heat the entire device or mold, and whether the material is cured in pre-heated oven or not. The cure times listed are not tested on a lot to lot basis and meant as recommendations only.

INSTRUCTIONS FOR USE

Mixing and Vacuum Deaeration

Combine Part A and Part B in a 10:1 mix ratio prior to use. Airless mixing, metering or dispensing equipment is recommended for production operations. If mixing by hand, take care to minimize air entrapment and check the work time prior to mixing and dispensing.

Remove air entrapped during mixing by common vacuum deaeration procedure, observing all applicable safety precautions. Slowly apply full vacuum to a suitable container of at least four times the volume of material being de-aired. Hold vacuum until bulk deaeration is complete. For further information please see [Mixing and Deairing Addition Cure Silicones](#).

Substrate Considerations

R-2613 cures in contact with most materials common to electronic assemblies. Exceptions include butyl and chlorinated rubbers, some Tin condensation cure 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

Packaging

37 mL Side-by-Side Kit
 250 mL Side-by-Side Kit
 500 Gram Kit
 1 Gallon Kit (4.04 kg)
 5 Gallon Kit (20.2 kg)
 Drum Kit (198.5 kg)

Warranty

12 Months

containers with solvent or volatilizing the contaminant by heating. For further information please see [Avoiding Cure Inhibition](#).

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

ROHS AND REACH COMPLIANCE

Please [contact](#) NuSil Technology's Regulatory Compliance department with any questions or for further assistance.

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.

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.

PATENT / INTELLECTUAL PROPERTY WARNING

NuSil Technology disclaims any expressed or implied warranty against the infringement of any domestic or international patent/intellectual property right. NuSil Technology 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.



Polymer Systems Technology Limited

Silicone Sales & Services UK - Ireland - Benelux

© 2019 - **Polymer Systems Technology Limited™**

Unit 2. Network 4. Cressex Business Park,
Lincoln Road, High Wycombe, Bucks. HP12 3RF

tel: +44 (0) 1494 446610

web: <https://www.silicone-polymers.com>

email: sales@silicone-polymers.co.uk

