

GEL-8246

Firm silicone gel

DESCRIPTION

- 1: 1 Mix Ratio (Part A: Part B)
- High purity, higher viscosity, clear silicone gel

APPLICATION

- For protection of sensitive assemblies from mechanical shock, thermal shock, dust, and atmospheric contamination
- For applications requiring optically clear materials with a refractive index of 1.47 at 589nm
- Higher viscosity allows reduced flow into unwanted areas

PROPERTIES

Typical Properties	Average Result	Standard	NT-TM
Uncured:			
Appearance	Colorless	ASTM D2090	002
Viscosity, Mixed	35,000 cP (35,000 mPas)	ASTM D1084, D2196	001
Volatile Content	0.40 %	ASTM D2288	004
Refractive Index	1.47	ASTM D1218, D1747	018
Cured: 24 hours at 35°C			
Specific Gravity	1.05	ASTM D792	003
Durometer, Type 00	55	ASTM D2240	006
**Recommended cure time guidelines at various temperatures			
T90 at 25°C	24 hours		
T90 at 65°C	35 minutes	-	-
T90 at 85°C	5 minutes	-	-

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.

**Recommended cure times are based on the testing performed via ODR (Oscillating Disk Rheometer) where T90 is considered 90% 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.

INSTRUCTIONS FOR USE

Mixing & Vacuum Deaeration

For small or laboratory scale production, NuSil recommends dispensing using side by side kit packaging (i.e. 50 ml cartridge) or mix and meter equipment for larger scale production due to the pot life and high viscosity of the material. If mix meter or dual cartridge equipment is unavailable, GEL-8246 will require de-airing due to trapped air. NuSil recommends verification of the work time of the material, and observation of 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. Apply the vacuum while observing the uncured fluid for presence of bubble formation and increase vacuum slowly enough to avoid rapid foaming. Hold vacuum until presence of air is no longer evident. For more information visit www.nusil.com and review [Mixing and De-airing Addition Cure Silicones](#) in our technical resources.

Substrate Considerations

Cures in contact with most materials, exceptions include: sulfur-cured organic rubbers, latex, chlorinated rubbers, some RTV silicones and unreacted residues of some curing agents. Epoxies with amine catalysts and solder flux are known to inhibit cures of platinum catalyzed silicones, NuSil Technology recommends taking precaution to minimize contact with said substrates. For more information visit www.nusil.com and review [Avoiding Cure Inhibition](#) in our technical resources. Some bonding applications may require the use of a primer. NuSil Technology's CF2-135 is recommended for most metallic substrates, some plastics and when cure inhibition is observed on substrate. In general, NuSil Technology's SP-120 is recommended for use with 100% Fluorosilicones. For more information visit www.nusil.com and review [Choosing a Silicone Primer / Adhesive System for Engineering Applications](#), in the technical resources.

Substrates should be free of dust, oil, and fingerprint soils. Clean substrates using suitable industrial techniques for cleaning devices substrate. If using hydrocarbon solvent cleaning (e.g. acetone, toluene), a final rinse with reagent grade isopropanol is recommended. If using aqueous detergent cleaning, multiple final rinses with de-ionized water or a single rinse with reagent grade isopropanol is recommended. Adhesion to fluoroplastic substrates is generally poor but may be improved with chemical etching or plasma etching of the substrate

Clean-Up

Remove from surfaces by first wiping off excess uncured material with a suitable, dry, lint-free wipe and then by wiping down the surface with a lint-free wipe soaked with xylene of reagent grade isopropanol. Complete the clean-up process with

Packaging

2 Pint Kit (910 g)
2 Gallon Kit (7.28 kg)

Warranty

12 Months

a final rinse with reagent grade isopropanol. The user is responsible for compliance with all applicable regulations governing disposal of waste materials as indicated in the MSDS. For information on removing cured material please visit www.nusil.com and review [Silicone Removal for Electronic Rework Applications](#) in our technical resources.

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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