

R-2145

R1-2145



Creative Partners in a Material World

NuSil Technology

1050 Cindy Lane • Carpinteria, CA 93013
805/684-8780 • 805/566-9905 Fax
www.nusil.com

An ISO 9001 Certified Company

Extremely Tough, High Durometer, Fast-Cure Adhesive/Sealants

Product Profile

Description

- Two-part, gray silicone adhesive systems
- Cures at room temperature or rapidly by applying heat in an oven or by a heat gun or lamp
- Does not require atmospheric moisture to cure
- No curing byproducts such as acetic acid or methyl alcohol
- Products available in easy-to-use, airless side-by-side kits that eliminate mixing and deairing difficulties
- R-2145 has a work time of ~15 minutes while R1-2145 has a work time of ~1 hour
- 1:1 Mix Ratio (Part A:Part B)

Applications

- 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

Typical Properties	Result		Metric Conv.		ASTM	NT-TM
	R-2145	R1-2145	R-2145	R1-2145		
Uncured:						
Appearance, Part A		White		-	D2090	002
Appearance, Part B		Black		-	D2090	002
Color, Mixed		Dark Gray		-	-	-
Extrusion Rate, Part A	275 g/min	265 g/min			C603	033
Extrusion Rate, Part B	240 g/min	250 g/min			C603	033
Work Time	15 min	1 hour	-	-	-	008
Cured : 2 hours @ 65°C						
Specific Gravity		1.16		-	D792	003
Durometer, Type A		45		-	D2240	006
Tensile Strength	1,125 psi	1,000 psi	7.6 MPa	6.9 MPa	D412, D882	007
Elongation		400%		-	D412, D882	007
Tear Strength, Die B	115 ppi	190 ppi	20.3 N/mm	33.5 N/mm	D624	009
Stress @ 200% Strain	575 psi	525 psi	4.0 MPa	3.6 MPa	D412, D882	007
Lap Shear, unprimed		145 psi		1.0 MPa	D1002	010
Lap Shear, primed w/ CF1-135	590 psi	625 psi	4.1 MPa	4.3 MPa	D1002	010
180° Peel, primed w/ CF1-135	70 ppi	50 ppi	12.3 N/mm	8.8 N/mm	D903	104
Young's Modulus		300 psi		2.1 MPa	-	-
Dielectric Strength		825 Volts/mil		32.5 kV/mm	D149	-

Instructions For Use

Mixing

R-2145 and R1-2145 mix at a 1:1 mix ratio when extracted from their 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 Technology recommends discarding the first few grams of extruded material.

R-2145 and R1-2145 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.

Packaging

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)

Warranty

6 Months

Substrate Consideration

R-2145 and R1-2145 cure 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 contaminants. Also clean and dry containers and dispensers being used with R-2145 and R1-2145. Prevent cure inhibition by washing all containers with clean solvent or volatilizing the contaminants by heating.

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

Adjustable Cure Schedule

Product cures at a wide range of cure times and temperatures to accommodate different production needs. Contact NuSil Technology for details.

Warnings About Product Safety

NuSil Technology believes that the information and data contained herein are accurate and reliable. However, 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 Sheets 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, obtain available product safety information and take the necessary steps to ensure safety of use.

Specifications

Do not use the typical properties shown in this technical profile as a basis for preparing specifications. Please contact NuSil Technology for assistance and recommendations in establishing particular specifications.

Patent Warning

NuSil Technology disclaims any expressed or implied warranty against the infringement of any patent. NuSil Technology does not warrant the use or sale of the products described herein will not infringe the claims of any United States' or other country's patents covering the product itself, its use in combination with other products or its use in the operation of any process.

Warranty Information

NuSil Technology's warranty period is 6 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 any other expressed or implied warranty, including 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.