LS1-6941

Optical thermoset

DESCRIPTION

- Two-part, pourable, optically clear, silicone
- 1:1 Mix Ratio (Part A:B)

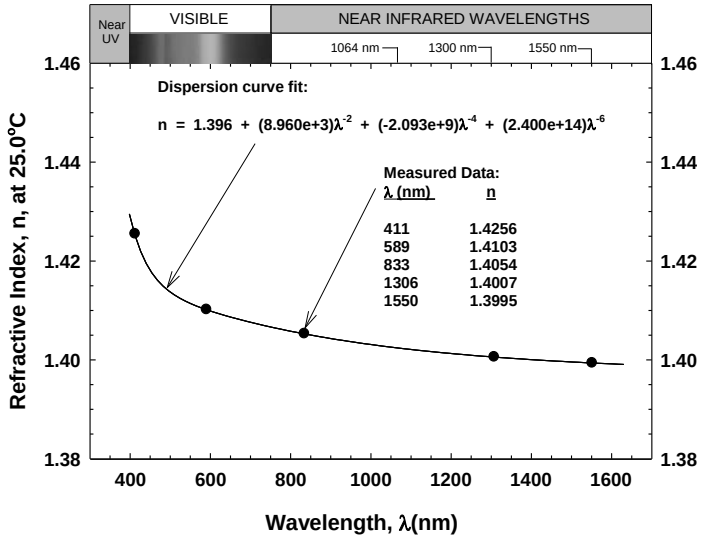
APPLICATION

- Use in the injection and transfer molding of optical components
- As an adhesive or encapsulant for applications requiring index matching at 1.41

PROPERTIES

Typical Properties	Average Result	Metric Conv.	Standard	NT-TM
Uncured:				
Appearance	Transparent	-	ASTM D2090	002
Viscosity, Part A	75,000 cP	75,000 mPas	ASTM D1084, D2196	001
Viscosity, Part B	50,000 cP	50,000 mPas	ASTM D1084, D2196	001
Refractive Index, Part A	1.41	-	ASTM D1747, D1218	018
Refractive Index, Part B	1.41	-	ASTM D1747, D1218	018
Work Time	>24 hours	-	-	008
Cured: 30 min at 150°C (302°F)				
Specific Gravity	1.03	-	ASTM D792	003
Durometer, Type A	50	-	ASTM D2240	006
Tensile Strength	750 psi	5.2 MPa	ASTM D412	007
Elongation	305%	-	ASTM D412	007
Tear Strength	80 ppi	14.1 kN/m	ASTM D624	009
Refractive Index vs. Wavelength	See chart	-	-	-
Optical Absorption vs. Wavelength	See chart	-	-	-

Refractive Index vs. Wavelength (25°C)
Lightspan Optical Thermoset
LS1-6941



Optical Absorption vs. Wavelength (25°C)
Lightspan Optical Thermoset
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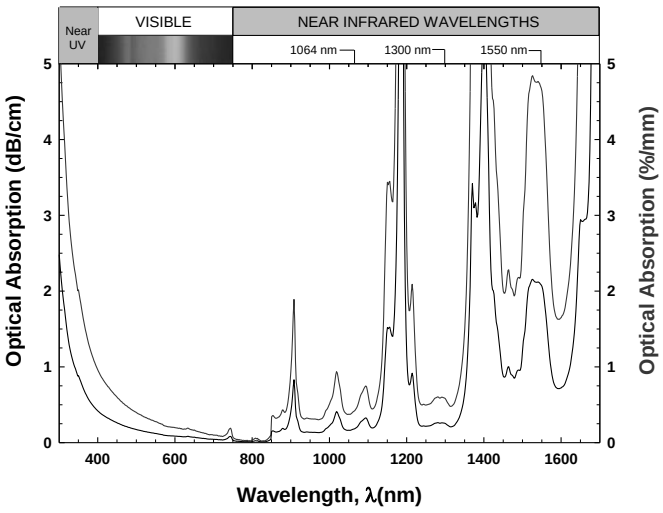

INSTRUCTIONS FOR USE

Mixing

Thoroughly stir individual parts prior to addition to ensure a homogenous mixture. Mix Parts A and B in a 1:1 ratio.

Vacuum Deaeration

Removed 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.

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

Substrate Consideration

LS1-6941 will cure in contact with most materials common to biomedical assemblies. Exceptions include sulfur-cured organic rubbers, latex, chlorinated rubbers, some RTV silicones and unreacted residues of some curing agents.

Adjustable Cure Schedule

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

OPERATING TEMPERATURE

The operating temperature range of a silicone in any application is dependent on many variables, including but not limited to: temperature, time of exposure, type of atmosphere, exposure of the material's surface to the atmosphere, and mechanical stress. In addition, a material's physical properties will vary at both the high and low end of the operating temperature range. This type of silicone typically remains flexible at extremely low temperatures and has been known to perform at -50°C (-58°F) as well as resist breakdown at elevated temperatures up to 200°C (392°F). The user is responsible to verify optical and mechanical performance of a material in a specific application.

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.

Packaging	Warranty
20 gm 2 Part Kit 50 mL SxS Kit 50 gm 2 Part Kit 400 ml SxS Kit 2 Pint Kit (910 g) 2 Gallon Kit (7.28 kg) 10 Gallon Kit (36.4 kg) 2 Drum Kit (360.0 kg)	12 Months

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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