

# LS-3443

Optically clear, diphenyl, firm silicone gel

## DESCRIPTION

- A two-part encapsulation gel
- A 1.43 refractive index
- 1:1 Mix Ratio (Part A:B)

## APPLICATION

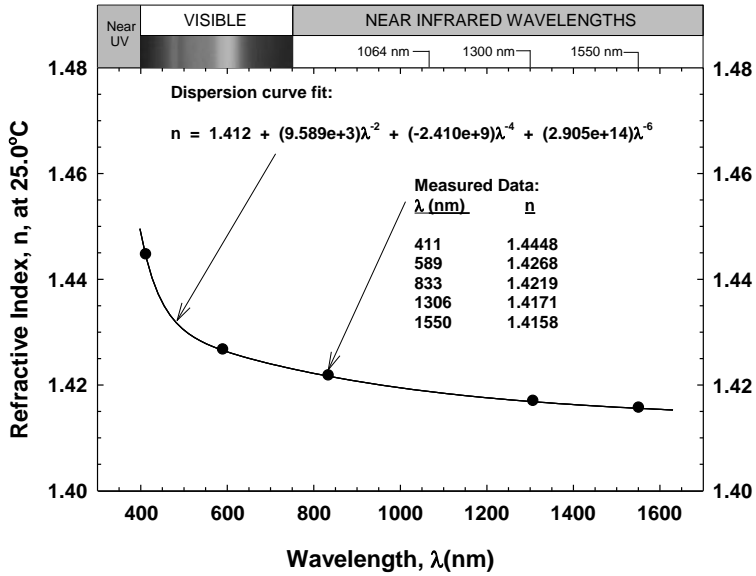
- For protection of sensitive photonics assemblies from mechanical shock, thermal shock, dust, and ambient atmosphere
- For use in extreme temperatures: features an operating an operating temperature range of -115°C to 265°C (-178°F to 500°F)

## PROPERTIES

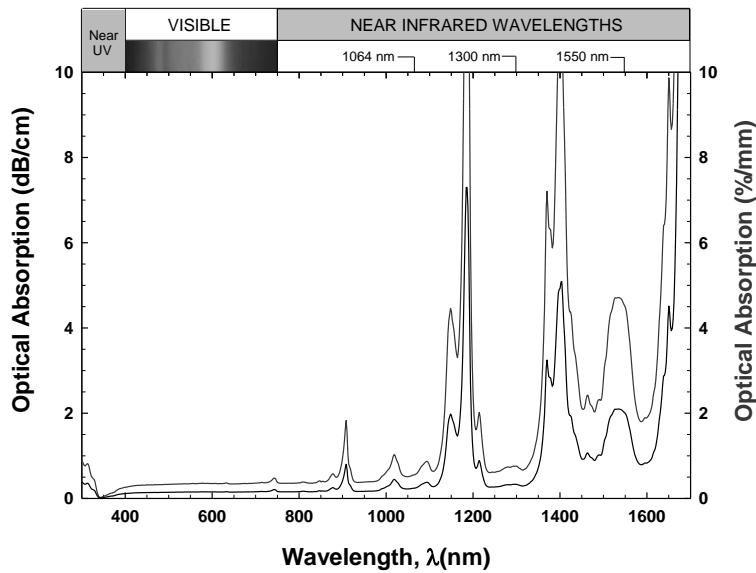
Typical Properties	Average Result	Metric Conv.	Standard	NT-TM
<b>Uncured:</b>				
Appearance	Translucent	-	ASTM D2090	002
Specific Gravity	1.00 Part A / 0.99 Part B	-	ASTM D792	003
Viscosity, Part A	500 cP	500 mPas	ASTM D1084, D2196	001
Viscosity, Mixed	650 cP	650 mPas	ASTM D1084, D2196	001
<b>Cured: 30 minutes at 100°C (212°F)</b>				
Penetration*	5 mm	-	ASTM DC-CTM 813	017
Dielectric Strength	500 volts/mil	19.7 kV/mm	ASTM D149	-
Dielectric Constant at 100 Hz	2.8	-	ASTM D924	-
Volume Resistivity	$1 \times 10^{15}$ ohm/cm	-	ASTM D257	040
Coefficient of Linear Thermal Expansion	$3 \times 10^{-4}$ cm/cm/°C	-	ASTM D3386	-
Refractive Index vs. Wavelength	See chart	-	-	-
Optical Absorption vs. Wavelength	See chart	-	-	-

\*GCA Precision Penetrometer, 19.5 gram shaft, 1 inch diameter, 5 seconds.

**Refractive Index vs. Wavelength (25°C)**  
*Lightspan Encapsulation Gel*  
 LS-3443, Lot# 40611



**Optical Absorption vs. Wavelength (25°C)**  
*Lightspan Encapsulation Gel*  
 LS-3443 Lot# 40611



## INSTRUCTIONS FOR USE

### Mixing

Thoroughly mix Part A with Part B in a 1:1 mix ratio by weight or volume. Airless mixing, metering and dispensing equipment is recommended for production processing.

### 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.

### Substrate Consideration

Cures in contact with most materials, exceptions include: butyl and chlorinated rubber, some RTV silicones and unreacted residues of curing agents used with a few types of plastics.

### Adjustable Cure Schedule

Product cures at a wide range of cure times and temperatures to accommodate different production needs. [Contact](#) NuSil Technology 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

50 ml SxS Kit  
2 Pint Kit (910 g)  
2 Gallon Kit (7.28 kg)  
10 Gallon Kit (36.4 kg)

### Warranty

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.

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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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