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UK & Ireland Distributor



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LS-3440

Soft Silicone Gel

Description

- A two-part, encapsulation gel
- Extended work time
- 1.40 Refractive Index
- 1:1 Mix Ratio (Part A: Part B)

Applications

- For protection of sensitive photonics assemblies from mechanical shock, thermal shock, dust, and ambient atmosphere
- Extended work time allows voids in complex assemblies to fill in and permits time for any trapped air bubbles to float to the fluid surface and escape

Properties	Average Result	ASTM	NT-TM
Uncured:			
Appearance*	Transparent	D2090	002
Viscosity*	535 cP (535 mPas)	D1084, D2196	001
Viscosity (24 hours after catalyzation)*	1,000 cP (1,000 mPas)	D1084, D2196	001
Specific Gravity, Pycnometer*	0.98	D891, D1475	022
Refractive Index*	1.40	D1218, D1747	018
UV/Visible Spectrophotometry @ 400 nm, 1 cm path length*	99 % T	E275	100
Volatile Content, Part A*	0.6%	D2288	004
Volatile Content, Part B*	0.4%	D2288	004
Cured: 1 hour @ 100°C (212°F)			
Dielectric Strength	500 volts/mil (19.7 kV/mm)	D149	-
Dielectric Constant @ 100 Hz	2.8	-	-
Volume Resistivity	1 x 10 ¹⁵ ohm-cm	D257, D4496	040
Bulk Gel Hardness* (1" foot, 15.5 g force w/ 0.5g trigger for 5 seconds)	10.0 mm (0.4 inches)	-	036
Water Absorption (85°C, 85% R.H. for 168 hours)	0.09%	-	-
Refractive Index vs. Temperature, 589 nm	-3.95 x 10 ⁻⁴ /°C	-	-
Refractive Index vs. Wave length	See Chart	-	-
Optical Absorption vs. Wavelength	See Chart	-	-

*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.

Instructions for Use

Mixing

Thoroughly mix Part A with Part B in a 1:1 mix ratio by weight or volume. Increase the ratio of Part A to Part B in the initial mix for a softer gel (high penetration value) and increase the ratio of Part B to Part A for a firmer gel (lower penetration value). Deviations from the 1:1 mix ratio may change cure rates. 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.

Packaging

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

Warranty

6 Months

Substrate Considerations

Cures in contact with most materials. Exceptions include butyl, latex, chlorinated rubbers, some RTV silicones and unreacted residues of some curing agents.

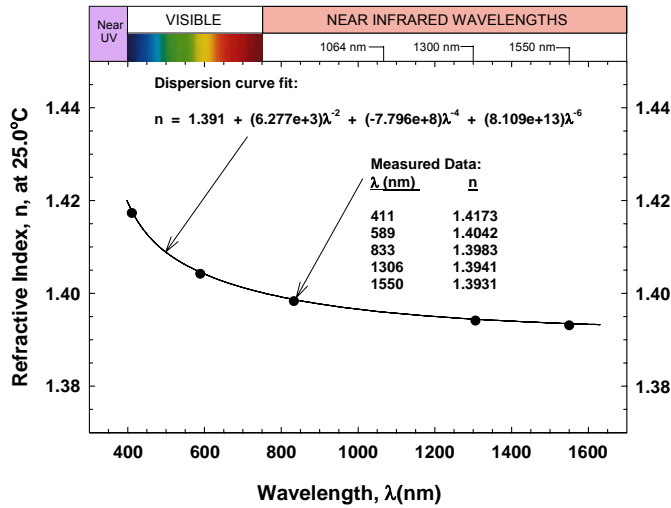
Adjustable Cure Schedule

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

Refractive Index vs. Wavelength (25°C)

Lightspan Encapsulation Gel

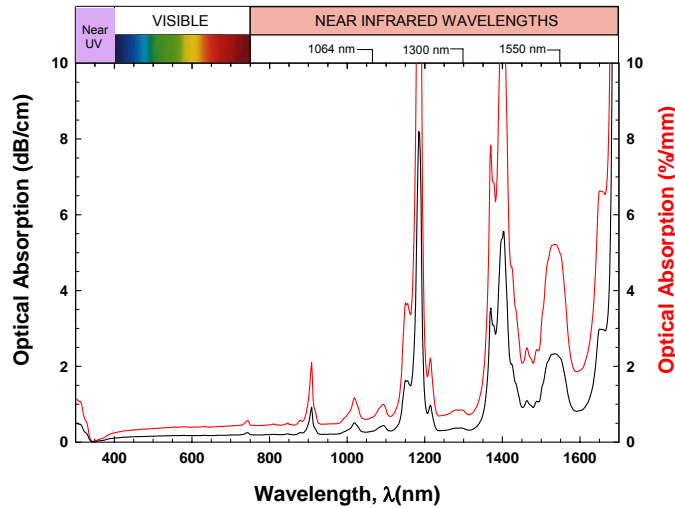
LS-3440, Lot# 32068



Optical Absorption vs. Wavelength (25°C)

Lightspan Encapsulation Gel

LS-3440 Lot# 32068



Heat and Low-Temperature Resistance

In most applications, silicone may be heated from 180 to 250°C, without any appreciable effect on physical properties. Silicone also demonstrates flexibility at extreme low temperatures, with a stiffening temperature range of -50 to -70°C.

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. The user is responsible to verify performance of a material in a specific application.

RoHS and REACh Compliance

LS-3440 is compliant with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) regulation contained in Article 4(1) of the European Parliament and Council's Directive 2002/95/EC. RoHS mandates that manufacturers restrict the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polychlorinated biphenyls, and polybrominated diphenyl ethers in electrical and electronic equipment.

LS-3440 is also compliant with the Registration, Evaluation, and Authorization of Chemicals (REACh) regulation (European Union 1907/2006). LS-3440 does not contain any of the 16 chemicals identified as Substances of Very High Concern (SVHC) by the European Chemicals Agency (ECHA), which oversees 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 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 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

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