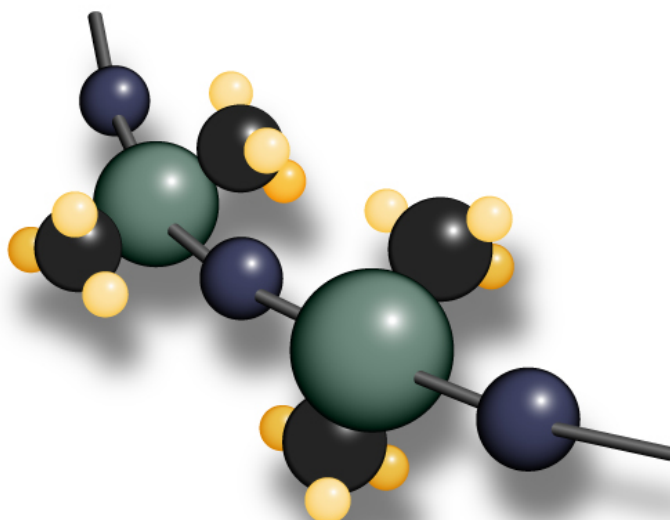


Polymer Systems Technology Limited

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LS-3200-10 PRELIMINARY DATA

Optical Primer Series

Product Profile



NuSil Technology
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Description

- Optical grade adhesion promoter agents dispersed in a high purity, non-flammable, non-toxic, optical grade solvent
- Compatible with LS-3 optical gels and LS-6 optical thermosets

Applications

- Use to improve the adhesion of optical gels and thermosets to substrates such as glasses, plastics and optical semi-conductors
- LS1-3200-10 provides high temperature stability
- LS2-3200-10 provides the best adhesion for use with more difficult substrates

| Typical Properties | Result | Metric Conv. | ASTM | NT-TM |
|--|-----------------------------|--------------|-------|-------|
| Appearance | Clear, slight straw tint | - | D2090 | 002 |
| Specific Gravity | 1.33 | - | D1217 | 003 |
| Boiling Point | 70°C | - | - | - |
| Heat of Vaporization | 250 joules/gram | - | - | - |
| Concentration of Solids in Solvent | 10% by weight | - | - | - |
| Evaporation Rate per Unit Surface Area | 1.3 g-cm ² /hour | - | - | - |
| Surface Tension | 26 dyne/cm | - | - | - |
| Refractive Index, 589 nm | 1.43 | - | D1218 | 018 |
| Particle Contamination | Level 25, MIL-STD-1246C | - | - | - |

Instructions for Use

Apply to the substrate by dip coating, spin coating, or dispense as fluid droplets. In most applications, the solvent carrier portion of the primer evaporates off the substrate surface in 30 minutes. Once the primer coat is dry, apply the LS-3 or LS-6 material to the primed substrate.

Material Compatibility

LS-3200-10 primers will not adversely affect most optical glasses, electronic grade metals, semiconductors, or engineering plastics. Prolonged exposure at elevated temperature (> 24 hrs, > 50°C) may cause swelling or crazing of certain ester-vulnerable plastics including polystyrene, ABS, polycarbonate, and some acrylic grades. LS-3200-10 primers dissolve hydrocarbon-solvated coatings, oils, or soils. If using LS-3200-10 primers in proximity with coatings such as resists or sealants, first conduct compatibility tests. This product is not miscible with water. Contact with many common elastomers may cause swelling or leaching of colorants from the elastomer. Contact Lightspan Applications Laboratory for engineering guidance with other compatibility concerns.

Coating Guidelines

LS-3200-10 primers are designed to provide an optically clear priming coat when applied as a dip or spin coat. If the primer is dried in an excessively thick layer, optical transmission of the layer may decrease. Primer solids concentration can be customized by NuSil Technology for special applications.

Storage

Containers should remain sealed when not in use. This material hydrolyzes in the presence of atmospheric moisture. It is recommended that an inert gas, such as argon or nitrogen, be used to blanket the product before closing the container. Hydrolyzation is indicated by a milky appearance, and once occurred, the material cannot be reclaimed and will contaminate any unreacted primers.

Packaging

30cc Bottle
480cc Bottle

Warranty

3 Months

Form number

Lightspan is a Registered Trademark of NuSil Technology

Warnings About Product Safety

NuSil Technology believes that the information and data contained herein is 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

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Warranty Information

NuSil Technology's warranty period is 3 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.