1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: SANTOLIGHT® SL-5267 OPTICAL FLUID

GENERAL USE: For optical coupling and light transmission in optical assemblies.

FOR CHEMICAL EMERGENCY, SPILL LEAK, FIRE, EXPOSURE, OR ACCIDENT
Call CHEMTREC - Day or Night - 1-800-424-9300.

For additional non-emergency information, call: 636-723-0240

2. COMPOSITION/INFORMATION ON INGREDIENTS

Product formulation is proprietary. No ingredients are known to be hazardous under normal use.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

NO SIGNIFICANT HAZARDS ASSOCIATED WITH THIS MATERIAL

POTENTIAL HEALTH EFFECTS It is not a hazardous chemical(s) under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

EFFECTS OF SINGLE OVEREXPOSURE:

SWALLOWING:
Small amounts transferred to the mouth by fingers during use, etc., should not injure. Swallowing large amounts may cause digestive discomfort.

SKIN ABSORPTION:
No evidence of adverse effects from available information.

INHALATION:
Short-term harmful health effects are not expected from vapor generated at ambient temperature.

SKIN CONTACT:
A single relatively short exposure causes no known adverse effects. Several repeated prolonged exposures (24 to 48 hours) may irritate.
EYE CONTACT:
Direct contact may cause temporary discomfort with mild redness, dryness, and
irritation.

EFFECTS OF REPEATED OVEREXPOSURE:
No evidence of adverse effects from available information.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:
A knowledge of the available toxicology information and of the physical and chemical properties
of the material suggests that overexposure is unlikely to aggravate existing medical conditions.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH
HAZARD EVALUATION:
None currently known. Refer also to section 11.

OTHER EFFECTS OF OVEREXPOSURE:
None currently known.

4. FIRST AID MEASURES

IF IN EYES OR ON SKIN, Immediate first aid is not likely to be required. However, this material
can be removed by washing thoroughly with soap and water. Wash heavily contaminated
clothing before reuse.

IF INHALED, immediate first aid is not likely to be required. However, if symptoms occur,
remove to fresh air. Remove material from eyes, skin and clothing.

IF SWALLOWED, immediate first aid is not likely to be required. A physician or Poison Control
Center can be contacted for advice.

NOTES TO PHYSICIAN:
There is no specific antidote. Treatment of overexposure should be directed at the control of
symptoms and the clinical condition of the patient. NOTE: Do not induce vomiting. Emesis of
this material may prove difficult due to its high viscosity. Aspiration may cause lung damage.

5. FIRE FIGHTING MEASURES

FLASH POINT (test method(s)): >440° F (226° C) by Cleveland Open Cup

FLAMMABLE LIMITS IN AIR (by volume):
  LOWER: N/A   UPPER: N/A

EXTINGUISHING MEDIA:
Water spray, foam, dry chemical, or carbon dioxide (CO₂) or other agents suitable for Class B
fires.

SPECIAL FIRE FIGHTING PROCEDURES:
Do not spray a solid stream of water or foam directly into a pool of hot, burning liquid as this
may cause frothing, and may intensify the fire. Use self-contained breathing apparatus when
fighting fire in an enclosed area.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
This product contains components which can generate sulfur dioxide, or small amounts of other toxic materials as a byproduct of oxidative thermal decomposition when exposed to fire. See section 10 for further information.

6. ACCIDENTAL RELEASE MEASURES

Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and then place in a chemical waste container. Flush residual spill area with water.

Refer to Section 13 for disposal information and Section 15 for reportable quantity information.

7. HANDLING AND STORAGE

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES. THESE PRACTICES INCLUDE AVOIDING UNNECESSARY EXPOSURE AND REMOVAL OF MATERIAL FROM EYES, SKIN AND CLOTHING.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

Storage: Product is stable under normal conditions of storage and handling. Keep container closed, in a cool dry place.

Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: This product does not cause significant eye irritation or eye toxicity requiring special protection. Use good industrial practice to avoid eye contact.

Skin Protection: Although it does not present a significant skin concern, minimize skin contamination by following good industrial practice. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

Respiratory Protection: Avoid breathing mist. Use NIOSH/MSHA approved respiratory protection equipment when airborne exposure is excessive. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 CFR 1910.134.

Ventilation: Provide natural or mechanical ventilation to minimize exposure. If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process
Airborne Exposure Limits:

Product:

- **OSHA PEL:** None established
- **ACGIH TLV:** None established

**OCCUPATIONAL EXPOSURE VALUES AND SOURCE:** None.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Light yellow essentially clear liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless to slight thiophenol odor</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>752°F @ 760 mm Hg (&gt; 400°C)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.1-1.3 @ 25/25°C</td>
</tr>
<tr>
<td>pH</td>
<td>Neutral</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not Available (air = 1)</td>
</tr>
<tr>
<td>Evaporation Rate (Butyl Acetate)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Very Low, practically insoluble.</td>
</tr>
<tr>
<td>Percent Volatiles</td>
<td>See Section 15.</td>
</tr>
</tbody>
</table>

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

10. STABILITY AND REACTIVITY

**Stability:** Product is stable under normal storage and handling conditions.

**Materials to Avoid:** Exposure to materials that are highly oxidizing should be avoided.

**Hazardous Decomposition Products:** Continued use at temperatures above 425°C may result in the formation of benzene and phenol. If the product is burned, complete combustion produces carbon dioxide and water and partial combustion produces carbon monoxide, smoke, soot and low molecular weight hydrocarbons.
11. TOXICOLOGICAL INFORMATION

Single exposure (acute) studies indicate:

Oral LD$_{50}$ (mg/kg): >34,600 mg/kg (Rat), practically nontoxic.

Dermal LD$_{50}$ (mg/kg): >10,200 mg/kg (Rabbit), practically nontoxic.

Vapor Inhalation LC$_{50}$ (mg/l): 0 out of 6 animals (Rat) died when exposed to an average theoretical vapor concentration of 0.029 mg/l air.

Other: Patch testing of 50 human volunteers produced no positive reaction following initial application, any of 15 serial applications or upon subsequent re-challenge 2 weeks later. SANTOLIGHT® SL-5267 is not considered a primary irritant, a fatiguing agent or a sensitizing agent.

Refer to Section 3 for further discussion of the health hazards associated with this product.

12. ECOLOGICAL INFORMATION

SANTOLUBES LLC has not conducted environmental toxicity studies with this product.

13. DISPOSAL CONSIDERATIONS

This material when discarded is not a hazardous waste as defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. Dispose of in accordance with all federal, state and local environmental regulations. Recommended method of disposal is by high temperature incineration at a RCRA approved TSDF. If there are any questions regarding the disposal of this material, please consult the Environmental, Health & Safety Department of SANTOLUBES LLC at 636-723-0240.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

This product is not hazardous under the applicable DOT, ICAO/IATA, or IMDG regulations.

15. REGULATORY INFORMATION

TSCA Inventory: All components of this product are either listed on or are exempt from listing on the TSCA inventory.

SARA Hazard Notification

Hazard Categories under Title III Rules (40 CFR 370): Not Applicable
CERCLA Reportable Quantity: Not Applicable

STATUS ON SUBSTANCE LISTS:

Components present in this product at a level which could require reporting under Chemicals (Hazards Information and Packaging) Regulations, Comprehensive Environmental Response Compensation and Liability Act (CERCLA), and Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III are NONE.

STATE-RIGHT-TO-KNOW - CALIFORNIA Proposition 65

This product contains no levels of listed substances, which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute.

MASSACHUSETTS 105 CMR 670.000 Right-To-Know, Substance List (MSL)

Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products. Components present in this product at a level which could require reporting under the statute are NONE.

PENNSYLVANIA Right-To-Know, Hazardous Substance List

Hazardous Substances and Special Hazardous Substances on the List must be identified when present in products. Components present in this product at a level which could require reporting under the statute are NONE.

CALIFORNIA SCAQMD RULE 443.1 VOCs

Volatile Organic Components (VOCs) are substances with vapor pressure of $\geq 0.5$ mm Hg at 140°C (219.2°F). This product contains < 1 % by weight VOCs.

OTHER REGULATORY INFORMATION:

EPA Hazard Categories: None.

C.H.I.P. Regulations:

<table>
<thead>
<tr>
<th>Designation</th>
<th>Symbol</th>
<th>Indication of Danger</th>
<th>Safety Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL-5267</td>
<td>N/A</td>
<td>N/A</td>
<td>S3/S7/S8</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

SANTOLUBES LLC urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate to the use and understanding of the data.
To promote safe handling, each customer or recipient should: (1) notify its employees, agents, contractors, and others whom it knows or believes will use this material of the information regarding hazards or safety; (2) furnish this same information to each of its customers for the product; and (3) request its customers to notify their employees, customers and other users of the product of this information.

This is for people trained in the National Paint & Coatings Association’s (NPCA) Hazardous Materials Identification System (HMIS) and the National Fire Protection Association (NFPA 704):

<table>
<thead>
<tr>
<th>NPCA-HMIS</th>
<th>NFPA 704</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Material: SANTOLIGHT® SL-5267</td>
<td>Flammability</td>
</tr>
<tr>
<td>1 HEALTH</td>
<td>1</td>
</tr>
<tr>
<td>1 FLAMMABILITY</td>
<td>0</td>
</tr>
<tr>
<td>0 REACTIVITY</td>
<td>Reactivity</td>
</tr>
<tr>
<td>B PROTECTIVE EQUIPMENT</td>
<td>Other Hazard</td>
</tr>
</tbody>
</table>

HAZARD INDEX

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = Slight Hazard</td>
<td>1 = Moderate Hazard</td>
<td>0 = Minimal Hazard</td>
</tr>
</tbody>
</table>

SANTOLIGHT® is a registered trademark of SANTOLUBES LLC.

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Date: 06/17/09 Supersedes 03/18/08