1 Identification

- Product identifier

  - Trade name: LENS BOND OPTICAL CEMENT TYPE J-91
  - Article number: S12650, S12651
  - Application of the substance / the mixture Laboratory chemicals

- Details of the supplier of the safety data sheet

  - Manufacturer/Supplier:
    Electron Microscopy Sciences
    1560 Industry Road
    USA-Hatfield, PA 19440
    Tel: 215-412-8400 Fax: 215-412-8450
    email: sgkck@aol.com
    www.emsdiasum.com

  - Information department: Product safety department

- Emergency telephone number:
  ChemTrec 1-800-424-9300 Contract CCN7661
  1-703-527-3887

2 Hazard(s) identification

- Classification of the substance or mixture

  GHS07

  Acute Tox. 4 H302 Harmful if swallowed.
  Skin Irrit. 2 H315 Causes skin irritation.
  Eye Irrit. 2A H319 Causes serious eye irritation.
  STOT SE 3 H335 May cause respiratory irritation.

- Label elements

  - GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms

  GHS07

- Signal word Warning

- Hazard-determining components of labeling:
  Triallyl isocyanurate
  Pentaerythritol tetra-3-Mercaptopropionate
  Propanic acid, 3-mercapto-,2-ethyl-2-[3-mercapto-1-oxoproxy)methyl]-1,3-propanediyyl ester

- Hazard statements
  Harmful if swallowed.
  Causes skin irritation.
  Causes serious eye irritation.
  May cause respiratory irritation.

- Precautionary statements
  Avoid breathing dust/fume/gas/mist/vapors/spray
  Wash thoroughly after handling.
  Do not eat, drink or smoke when using this product.

(Contd. on page 2)
Trade name: LENS BOND OPTICAL CEMENT TYPE J-91

Use only outdoors or in a well-ventilated area.
Wear protective gloves / eye protection / face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
If on skin: Wash with plenty of water.
Specific treatment (see on this label).
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
If eye irritation persists: Get medical advice/attention.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:

- NFPA ratings (scale 0 - 4)
  - Health = 2
  - Fire = 1
  - Reactivity = 0

- HMIS-ratings (scale 0 - 4)
  - Health = 2
  - Fire = 1
  - Reactivity = 0

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1025-15-6</td>
<td>Triallyl isocyanurate</td>
<td>&gt;25-% ≤80%</td>
</tr>
<tr>
<td>7575-23-7</td>
<td>Pentaerythritol tetra-3-Mercaptopropionate</td>
<td>&gt;10-% ≤25%</td>
</tr>
<tr>
<td>33007-83-9</td>
<td>Propanic acid, 3-mercapto-,2-ethyl-2-[[3-mercapto-1-oxopropoxy)methyl]-1,3-propanediy1 ester</td>
<td>&gt;10-% ≤25%</td>
</tr>
</tbody>
</table>

4 First-aid measures

- Description of first aid measures
- General information:
  - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
Trade name: LENS BOND OPTICAL CEMENT TYPE J-91

- After eye contact:
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: Immediately call a doctor.
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed: No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents: Use fire-fighting measures that suit the environment.
  - Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
  - Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures: Not required.
- Environmental precautions: Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
  - PAC-1:
    None of the ingredients is listed.
  - PAC-2:
    None of the ingredients is listed.
  - PAC-3:
    None of the ingredients is listed.

7 Handling and storage

- Handling:
  - Precautions for safe handling
    Ensure good ventilation/exhaustion at the workplace.
    Prevent formation of aerosols.
  - Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep receptacle tightly sealed.
8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

- Control parameters
  - Components with limit values that require monitoring at the workplace:
    The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls
  - Personal protective equipment:
    - General protective and hygienic measures:
      Keep away from foodstuffs, beverages and feed.
      Immediately remove all soiled and contaminated clothing.
      Wash hands before breaks and at the end of work.
      Avoid contact with the eyes and skin.
    - Breathing equipment:
      In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
  - Protection of hands:

  Protective gloves

  The glove material has to be impermeable and resistant to the product/substance/preparation.
  Due to missing tests no recommendation to the glove material can be given for the product/substance/preparation/chemical mixture.
  Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

  - Material of gloves
    The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

  - Penetration time of glove material
    The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

  - Eye protection:

  Tightly sealed goggles

9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      Form: Liquid
      Color: White
Trade name: LENS BOND OPTICAL CEMENT TYPE J-91

- **Odor:** Sulphurous
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
  - **Melting point/Melting range:** Undetermined.
  - **Boiling point/Boiling range:** 210 °C (410 °F)
- **Flash point:** 130 °C (266 °F)
- **Flammability (solid, gaseous):** Not flammable.
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.
- **Vapor pressure:** Not determined.
- **Density:**
  - **Relative density:** Not determined.
  - **Vapor density:** Not determined.
  - **Evaporation rate:** Not determined.
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - **Dynamic:** Not determined.
  - **Kinematic:** Not determined.
- **Solvent content:**
  - **VOC content:** 0.00 %
  - **Solids content:** 0.0 %
- **Other information:** No further relevant information available.

### 10 Stability and reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
  - Primary irritant effect:
    - on the skin: Irritant to skin and mucous membranes.
    - on the eye: Irritating effect.
    - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
    The product shows the following dangers according to internally approved calculation methods for preparations:
    Harmful
    Irritant

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    None of the ingredients is listed.
  - NTP (National Toxicology Program)
    None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety and Health Administration)
    None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - Behavior in environmental systems:
    - Bioaccumulative potential: No further relevant information available.
    - Mobility in soil: No further relevant information available.
  - Additional ecological information:
    - General notes:
      Water hazard class 3 (Self-assessment): extremely hazardous for water
      Do not allow product to reach ground water, water course or sewage system, even in small quantities.
      Danger to drinking water if even extremely small quantities leak into the ground.
    - Results of PBT and vPvB assessment
      - PBT: Not applicable.
      - vPvB: Not applicable.
    - Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation:
    Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.
### 14 Transport information

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UN-Number</strong></td>
<td>Void</td>
</tr>
<tr>
<td><strong>DOT, ADR, ADN, IMDG, IATA</strong></td>
<td>Void</td>
</tr>
<tr>
<td><strong>UN proper shipping name</strong></td>
<td>Void</td>
</tr>
<tr>
<td><strong>DOT, ADR, ADN, IMDG, IATA</strong></td>
<td>Void</td>
</tr>
<tr>
<td><strong>Transport hazard class(es)</strong></td>
<td>Void</td>
</tr>
<tr>
<td><strong>DOT, ADR, ADN, IMDG, IATA</strong></td>
<td>Void</td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Packing group</strong></td>
<td>Void</td>
</tr>
<tr>
<td><strong>DOT, ADR, IMDG, IATA</strong></td>
<td>Void</td>
</tr>
<tr>
<td><strong>Environmental hazards</strong>:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Special precautions for user</strong>:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>UN &quot;Model Regulation&quot;:</strong></td>
<td>Void</td>
</tr>
</tbody>
</table>

### 15 Regulatory information

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Safety, health and environmental regulations/legislation specific for the substance or mixture</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Sara</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Section 355 (extremely hazardous substances):</strong></td>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><strong>Section 313 (Specific toxic chemical listings):</strong></td>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><strong>TSCA (Toxic Substances Control Act):</strong></td>
<td></td>
</tr>
<tr>
<td>1025-15-6 Triallyl isocyanurate</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>68855-40-3 Isophorone dilsocyanate, Dihydroxyhydantoin, trimethylopropane diallyl ether Reaction product</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>7575-23-7 Pentaerythritol tetra-3-Mercaptopropionate</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>33007-83-9 Propanic acid, 3-mercapto-,2-ethyl-2-[3-mercapto-1-oxopropoxy)methyl]-1,3-propanediy1 ester</td>
<td>ACTIVE</td>
</tr>
<tr>
<td><strong>Hazardous Air Pollutants</strong></td>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><strong>Proposition 65</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Chemicals known to cause cancer:</strong></td>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><strong>Chemicals known to cause reproductive toxicity for females:</strong></td>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><strong>Chemicals known to cause reproductive toxicity for males:</strong></td>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><strong>Chemicals known to cause developmental toxicity:</strong></td>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>
### Carcinogenic categories

- **EPA (Environmental Protection Agency)**
  - None of the ingredients is listed.
- **TLV (Threshold Limit Value established by ACGIH)**
  - None of the ingredients is listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  - None of the ingredients is listed.

### GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

### Hazard pictograms

![GHS07]

### Signal word

**Warning**

### Hazard-determining components of labeling:

- Triallyl isocyanurate
- Pentaerythritol tetra-3-Mercapto-propionate
- Propanic acid, 3-mercapto-, 2-ethyl-2-[3-mercapto-1-oxopropoxy]methyl]-1,3-propanediy1 ester

### Hazard statements

- Harmful if swallowed.
- Causes skin irritation.
- Causes serious eye irritation.
- May cause respiratory irritation.

### Precautionary statements

- Avoid breathing dust/fume/gas/mist/vapors/spray
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves / eye protection / face protection.
- If swallowed: Call a poison center/doctor if you feel unwell.
- Rinse mouth.
- If on skin: Wash with plenty of water.
- Specific treatment (see on this label).
- If INHALED: Remove person to fresh air and keep comfortable for breathing.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If skin irritation occurs: Get medical advice/attention.
- Take off contaminated clothing and wash it before reuse.
- If eye irritation persists: Get medical advice/attention.
- Store in a well-ventilated place. Keep container tightly closed.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

### Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

### Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
Date of preparation / last revision: 07/17/2019

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3