Section 1. Product and Company Identification

Product Name  (S)-ar-Turmerone  
Product ID  T8269  
Chemical Name  (Synonyms)  
Supplier  LKT Laboratories, Inc  
545 Phalen Blvd.  
St. Paul, MN 55130 USA  
Ph: 651-644-8424 Fax: 651-644-8357  
www.lktlabs.com - getinfo@lktlabs.com  
Emergency Phone #  1-800-424-9300

Section 2. Hazards Identification

GHS Classification  
Eye irritation (Category 2A) H319  
Skin sensitization (Category 1) H317  
Acute aquatic toxicity (Category 2) H401  
Chronic aquatic toxicity (Category 2) H411

GHS Label elements including precautionary statements

Pictogram  
Signal word  Warning  
Hazard and precautionary statements

H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H411 - Toxic to aquatic life with long lasting effects.  
Precautionary statements

P261 - Avoid breathing dust, fumes, gas, mist, vapors, spray.  
P264 - Wash skin thoroughly after handling.  
P272 - Contaminated work clothing should not be allowed out of the workplace.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves, eye protection, face protection.  
P302 + P352 - IF ON SKIN: Wash with plenty of Soap and water.  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P337 + P313 If eye irritation persists: Get medical advice/attention.  
P363 - Wash contaminated clothing before reuse.  
P391 - Collect spillage.  
P501 - Dispose of contents/container to an approved waste disposal plant.

HMIS Classification  
Health hazard: 2  
Chronic health hazard: *  
Flammability: 0  
Physical hazard: 0

NFPA Rating  
Health hazard: 2  
Fire hazard: 0  
Reactivity hazard: 0

Potential Health Effects  
Inhalation - May be harmful if inhaled. May cause respiratory tract irritation.  
Skin - May be harmful if absorbed through skin. May cause an allergic skin reaction. May cause skin irritation.  
Eyes - Causes serious eye irritation.
Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substances</th>
<th>Ingredient: Title Compound</th>
<th>Percent: 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
<td>C_{15}H_{20}O</td>
<td>216.32</td>
</tr>
<tr>
<td>CAS No.</td>
<td>532-65-0</td>
<td>EC No.</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Eye Contact
Flush eyes with plenty of water for 15 minutes and consult a physician.

Skin Contact
Wash off with soap and plenty of water. Consult a physician.

Inhalation
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5. Firefighting Measures

Flash Point
Not available.

Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Firefighting Procedures
Wear self-contained breathing apparatus for firefighting if necessary.

Unusual Fire Hazards
Not available.

Section 6. Accidental Release Measures

Personal Precautions
Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleanup
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Section 7. Handling and Storage

Handling
Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: 4°C

Hazardous Decomposition Products
Hazardous decomposition products formed under fire conditions.

Other Remarks
Air, light, and moisture sensitive.
**Section 8. Exposure Controls/Personal Protection**

**Personal protective Equipment**
- EXPOSURE CONTROLS: Contains no substances with occupational exposure limit values.
- Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**PERSONAL PROTECTION**
- Eye/face protection: Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
- Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
- Body protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Section 9. Physical and Chemical Properties**

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid</td>
<td>Yellowish oil</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Hexane, Petrol ether, Ethanol</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not available.</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not available.</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Not available.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>log Pow: 4.632</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PhysicalState</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>Not available.</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Section 10. Stability and Reactivity**

- **Stability**: Stable under recommended storage conditions.
- **Materials To Avoid**: Strong acids and oxidizing agents.
- **Hazardous Decomposition Products**: Hazardous decomposition products formed under fire conditions.
### Section 11. Toxicological Information

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>Not available.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not available.</td>
</tr>
<tr>
<td>Inhalation LC50</td>
<td>Not available.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not available.</td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>Not available.</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other information on acute toxicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Aspiration Hazard</td>
<td>Not available.</td>
</tr>
<tr>
<td>Specific organ toxicity single exposure (GHS)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Synergistic effects</td>
<td>Not available.</td>
</tr>
<tr>
<td>Specific organ toxicity repeated exposure (GHS)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Additional Information</td>
<td>RTECS: Not available.</td>
</tr>
<tr>
<td>Teratogenicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Signs and symptoms of exposure</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Potential Health Effects**
- Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
- Skin: May be harmful if absorbed through skin. May cause an allergic skin reaction. May cause skin irritation.
- Eyes: Causes serious eye irritation.
- Ingestion: May be harmful if swallowed.

**Carcinogenicity**
- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Section 12. Ecological Information

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity</td>
<td>Acute aquatic toxicity.</td>
</tr>
<tr>
<td></td>
<td>Chronic aquatic toxicity.</td>
</tr>
<tr>
<td></td>
<td>Toxic to aquatic life with long-lasting effects.</td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>Not available.</td>
</tr>
<tr>
<td>PBT and vPvB assessment</td>
<td>PBT/vPvB assessment not available as chemical safety assessment not required/not</td>
</tr>
</tbody>
</table>
**Persistence and degradability** Not available.

**Bioaccumulative potential** Not available.

**Other adverse effects** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

### Section 13. Disposal Considerations

**Waste Disposal**

- Dispose of material according to all federal, state and local regulations.
- Offer material to a licensed, professional waste disposal company to dispose of as unused product.

### Section 14. Transport Information

**DOT (US)** Not dangerous goods.

- **IATA**
  - UN number: 3082  
  - Class: 9  
  - Packing Group: III  
  - Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. - (S)-ar-Turmerone

- **IMDG**
  - UN number: 3082  
  - Class: 9  
  - Packing Group: III  
  - EMS #: F-A, S-F  
  - Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (S)-ar-Turmerone

**Further Information** EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

### Section 15. Regulatory Information

- **SARA 302 Components**
  - SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

- **SARA 313 Components**
  - SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

- **SARA 311/312 Components**
  - Acute health hazard

**Massachusetts Right To Know Components** No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

- (S)-ar-Turmerone  
  - CAS #: 532-65-0  
  - Revision Date:

**New Jersey Right To Know Components**

- (S)-ar-Turmerone  
  - CAS #: 532-65-0  
  - Revision Date:

**California Prop 65 Components**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm.

### Section 16. Other Information

**Other information**

The information in this document is believed to be correct but is not necessarily complete. LKT does not guarantee the accuracy of the information. The burden of verifying the information in this document rests solely upon the user.