1. Product and Company Identification

Material name: Epoxidized Soybean Oil
Revision date: 05-19-2011
Version #: 01
CAS #: 8013-07-8
Product use: Industrial use.
Manufacturer/Supplier: Industrial Oils & Lubricants
9320 Excelsior Blvd.
Hopkins, Minnesota 55343
US
IOLCustomerService@cargill.com
General Information: 1-800-842-3631
Emergency: Emergency Telephone: 1-800-424-9300

2. Hazards Identification

Physical state: Liquid.
Appearance: Colorless to slightly yellow, viscous liquid.
Emergency overview: CAUTION!
Prolonged or repeated skin contact may cause drying, cracking, or irritation.
OSHA regulatory status: This product is not hazardous according to OSHA 29CFR 1910.1200.
Potential health effects:
- Eyes: Direct contact with eyes may cause temporary irritation.
- Skin: Prolonged or repeated contact may cause itching, redness, and rash in some individuals.
- Inhalation: Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
- Ingestion: No harmful effects expected in amounts likely to be ingested by accident.

3. Composition / Information on Ingredients

Components | CAS # | Percent
--- | --- | ---
Epoxidized soybean oil | 8013-07-8 | 100

Composition comments: All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures:
- **Eye contact**: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention promptly if symptoms occur after washing.
- **Skin contact**: Wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
- **Inhalation**: If symptomatic, move to fresh air. Get medical attention if symptoms persist.
- **Ingestion**: First aid is normally not required. However, if greater than 1/2 liter (pint) ingested, seek medical attention.

5. Fire Fighting Measures

Flammable properties: No unusual fire or explosion hazards noted.
Extinguishing media:
Fire fighting equipment/instructions: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Hazardous combustion products: Carbon oxides.
6. Accidental Release Measures

Personal precautions
Wear appropriate personal protective equipment (See Section 8).

Methods for cleaning up
Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

Large Spills: Flush area with water. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

7. Handling and Storage

Handling
Observe good industrial hygiene practices.

Storage
Keep container closed.

8. Exposure Controls / Personal Protection

Occupational exposure limits
No exposure limits noted for ingredient(s).

Engineering controls
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye / face protection
Wear safety glasses with side shields (or goggles).

Skin protection
Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure.
Contact glove manufacturer for specific information.

Respiratory protection
If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister.

General hygiene considerations
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical & Chemical Properties

Appearance
Colorless to slightly yellow, viscous liquid.

Color
Colorless to slightly yellow

Odor
Faint.

Odor threshold
Not available.

Physical state
Liquid.

Form
Viscous liquid.

pH
Not available.

Melting point
Not available.

Freezing point
Not available.

Boiling point
Not available.

Flash point
554 °F (290 °C) Cleveland Open Cup

Evaporation rate
Not available.

Flammability limits in air, upper, % by volume
Not available.

Flammability limits in air, lower, % by volume
Not available.

Vapor pressure
Not available.

Vapor density
Not available.

Specific gravity
0.992

Solubility (water)
Insoluble.

Partition coefficient (n-octanol/water)
Not available.

Auto-ignition temperature
Not available.

Decomposition temperature
Not available.
10. Chemical Stability & Reactivity Information

Chemical stability
Material is stable under normal conditions.

Conditions to avoid
Excessive heat.

Incompatible materials
Oxidizing agents. Strong bases.

Hazardous decomposition products
No hazardous decomposition products are known.

Possibility of hazardous reactions
Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

<table>
<thead>
<tr>
<th>Product</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epoxidized Soybean Oil (8013-07-8)</td>
<td>Acute Oral LD50 Rat: &gt; 5000 mg/kg</td>
</tr>
</tbody>
</table>

Sensitization
No sensitizing effects known.

Carcinogenicity
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Mutagenicity
Ames test: Negative.

12. Ecological Information

Ecotoxicological data

<table>
<thead>
<tr>
<th>Product</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epoxidized Soybean Oil (8013-07-8)</td>
<td>EC50 Algae: 8 mg/l 72 hours LC50 Leuciscus idus: 900 g/ml 48 hours</td>
</tr>
</tbody>
</table>

Ecotoxicity
Not expected to be harmful to aquatic organisms.

Persistence and degradability
The product is readily biodegradable.

Bioaccumulation / Accumulation
Bioaccumulation is unlikely to be significant because of the low water solubility of this product.

Partition coefficient (n-octanol/water)
Not available.

Mobility in environmental media
The product is insoluble in water and will sediment in water systems.

13. Disposal Considerations

Disposal instructions
Dispose of contents/container in accordance with local/regional/national/international regulations.
When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261.

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

TDG
Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations
This product is not hazardous according to OSHA 29CFR 1910.1200.

TSCA Section 12(b) Export Notification(40 CFR 707, Subpt. D)
Not regulated.
CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)
None

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories
- Immediate Hazard - No
- Delayed Hazard - No
- Fire Hazard - No
- Pressure Hazard - No
- Reactivity Hazard - No

Section 302 extremely hazardous substance (40 CFR 355, Appendix A)
No

Section 311/312 (40 CFR 370)
No

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)
Not controlled

WHMIS status
Non-controlled

Inventory status

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
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<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
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<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
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<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

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

16. Other Information

Further information
HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings
- Health: 1
- Flammability: 1
- Physical hazard: 0

NFPA ratings
- Health: 1
- Flammability: 1
- Instability: 0

Disclaimer
To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Issue date
05-19-2011