



HEALTH	1
FLAMMABILITY	1
REACTIVITY	0

## Safety Data Sheet (SDS)

Revision / Review Date: 3/11/14

### 1. Chemical Product and Company Identification

Product Name: ESO  
Distributed By: HB Chemical  
1665 Enterprise Parkway  
Twinsburg Oh 44087  
Phone - 330-920-8023  
MSDS Prepared By (w Suppliers Input): HB Chemical  
Chemical Name / Family: Epoxidized Soybean Oil / Esters  
Product Use: Plasticizer  
CAS No. 8013-07-8  
EC-No. 232-391-0  
Common/Generic name ESO  
OSHA Status Non Hazardous

For emergency health, safety, and environmental information, calls 330-920-8023  
For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300

### 2. Hazard(s) Identification

Eye: May cause slight irritation.  
Skin: May cause slight irritation.  
Inhalation: May cause dizziness.

### 3. Composition / Information on Ingredients

<u>Name</u>	<u>CAS No.</u>	<u>% by Weight</u>
Epoxidized Soybean Oil	8013-07-8	100

### 4. First Aid Measures

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.  
Eyes: Flush eyes with water. Call a physician if irritation develops.

<u>Skin:</u>	Wash off with soap and plenty of water. Consult a physician.
<u>Ingestion:</u>	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### **5. Fire-Fighting Measures**

<u>Fire-fighting procedures:</u>	Wear self-contained breathing apparatus for firefighting if necessary.
<u>Suitable extinguishing media:</u>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<u>Unusual Fire and Explosion Hazards:</u>	Solid stream of water may cause frothing.

### **6. Accidental Release Measures**

<u>Personal precautions:</u>	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
<u>Environmental precaution:</u>	Prevent run-off into sewers or natural waterways. Spills with potential to contaminate coastal waterways must be reported to the U.S. Coast Guard (800-424-8802).
<u>Materials for containment and cleaning up:</u>	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Remove contaminated clothing and wash before reuse.

### **7. Handling and Storage:**

<u>Storage:</u>	Store in tightly sealed containers in dry, ambient temperature conditions and well ventilated place.
<u>Handle:</u>	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.

### **8. Exposure Controls / Personal Protection**

<u>Respiratory and personal protection:</u>	Respirators should be selected when TWA exceeded. Avoid hot vapors when mixing or packaging.
<u>Eye Protection:</u>	Wear safety glasses with side shields.
<u>Skin protection:</u>	Impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the

<u>Hand protection:</u>	dangerous substance at the specific workplace. Wear boots and apron as appropriate. 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.
<u>Ventilation:</u>	For normal operation local exhaust ventilation should suffice.
<u>Facilities:</u>	There should be a shower facility and eyewash in the building where this product is being stored and handled. Exercise good chemical handling practice.
<u>Engineering Measures:</u>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### 9. Physical and Chemical Properties

<u>Physical Form:</u>	Viscous liquid
<u>Appearance/Odor:</u>	light yellow/ slight odor
<u>Specific Gravity:</u>	@ 25 °C = 0.9970
<u>Solubility in Water:</u>	>1%
<u>Flash Point, TAG CC F:</u>	155°C-231 °C (448 °F-310°F)
<u>Evaporation Rate (Water ~ 1) :</u>	< 1 (butyl acetate=1)
<u>Vapor Pressure (mm Hg) :</u>	>0.1mm Hg @ 200°C
<u>Vapor Density (Air ~ 1):</u>	25
<u>Boiling Point (°F):</u>	482 °F- 750°F
<u>Refractive Index 25°C:</u>	N/A
<u>Melting point:</u>	0°C (35°F)
<u>Relative density:</u>	0.997 g/mL

### 10. Stability and Reactivity

<u>Stability:</u>	Stable under normal conditions.
<u>Incompatibility:</u>	Strong oxidizing agents.

### 11. Toxicological Information

This material is not listed as a carcinogen or potential carcinogen by NTP, IARC, or OSHA.

<u>Eye Effects:</u>	Mildly irritating (rabbit).
<u>Skin Effects:</u>	Mildly irritating (rabbit); not a sensitizer (guinea pig).
<u>Dermal LD50:</u>	>20 g/kg (rabbit)
<u>Oral LD50:</u>	= 22.5 g/kg (rat)

## 12. Ecological Information

<u>Toxicity to fish:</u>	LC50 - Leuciscus idus (Golden orfe) - 900 mg/l - 48 h
<u>Toxicity to daphnia and other aquatic invertebrates:</u>	EC50 - Daphnia magna (Water flea) - > 100 mg/l - 24 h
<u>Toxicity to algae:</u>	EC50 - Desmodesmus subspicatus (green algae) - 8 mg/l - 72 h
<u>Biodegradability aerobic:</u>	Exposure time 28 d Result: 92 % - Readily biodegradable. (OECD Test Guideline 301B)

## 13. Disposal Considerations

Incineration by a permitted hazardous waste facility in accordance with all regulatory requirements is the preferred method of disposal. Empty containers can be rinsed with a suitable solvent/surfactant and steamed to remove residual product and fumes before disposal or reuse in accordance with applicable regulations. Contacting a waste disposal service is recommended.

## 14. Transport Information

<u>D.O.T.:</u>	Not dangerous good
<u>IMDG:</u>	Environmentally hazardous substance, liquid, n.o.s.
<u>IATA:</u>	Environmentally hazardous substance, liquid, n.o.s.

## 15. Regulatory Information

<u>OSHA: Sara title III:</u>	311/312 categories: none 313 Reportable ingredients: None
<u>Toxic Substance Control Act (TSCA):</u>	All international ingredients are listed in the TSCA Inventory.
<u>California Proposition 65:</u>	None
<u>Pennsylvania Right To Know Components:</u>	Soybean oil, epoxidized, CAS-No. 8013-07-8
<u>New Jersey Right To Know Components:</u>	Soybean oil, epoxidized, CAS-No. 8013-07-8
<u>Toxic Substances Control Act (TSCA):</u>	This product is in compliance with the TSCA regulation of the United States.

<u>Australian Inventory of Chemical Substances (AICS):</u>	This product is listed on the AICS inventory of Australia.
<u>China Inventory of Existing Chemical Substances (IECSC):</u>	This product is listed on the IECSC Inventory of China.
<u>Domestic Substance List (DSL):</u>	This product is listed on the DSL inventory of Canada.
<u>European Inventory of Existing Chemical Substances (EINECS):</u>	This product is listed on the EINECS inventory of Europe. #232-391-0.
<u>Korea Existing Chemicals List (ECL):</u>	This product is listed on the ECL of Korea.
<u>Japan (ENCS):</u>	This product is listed on the ENCS of Japan. #2-1434.
<u>New Zealand Inventory of Chemicals (NZIoC):</u>	This product is listed on the NZIoC of New Zealand.
<u>Philippines Inventory of Chemicals and Chemical Substances (PICCS):</u>	This product is listed on the PICCS of the Philippines.

#### **16. Other Information**

The above information has been compiled from what we believe to be credible sources. To our knowledge the information is accurate and reliable, however, it is not guaranteed. Any recommendations issued by HB Chemical personnel or literature is derived from experience and by no means should be taken as fact or construed as a recommendation to violate of any law, regulation or patent. It is the users responsibility to determine the suitability of any HB supplied material in their application. The individual conditions of each customer are well outside of our control and we cannot be held liable for its functionality and use. Please contact our office should you need specific information beyond what is supplied above. As with all Chemical usage safety precautions beyond the stated are highly recommended.