



Safety Data Sheet (SDS)

Revision 1/ Review Date: 5/1/2020

1. Chemical Product and Company Identification

Product Name:	ESO
Distributed By:	HB Chemical 1665 Enterprise Parkway Twinsburg Oh 44087 Phone - 330-920-8023
SDS Prepared By (w Suppliers Input):	HB Chemical
Chemical Name / Family:	Epoxidized Soybean Oil / Esters
Common/Generic name:	ESO, Soybean oil, Epoxidized ESBO
Product Use:	Plasticizer
CAS No:	8013-07-8
EC-No:	232-391-0
REACH:	01-2119471314-43-XXXX
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

<u>Warning:</u>	Not available.
<u>Signs and Symptoms of Exposure:</u>	Not available.
<u>Primary Routes of Entry:</u>	Not available.
<u>Medical Conditions Generally Aggravated by Exposure:</u>	None known.
<u>Eye:</u>	May cause slight irritation.
<u>Skin:</u>	May cause slight irritation.
<u>Inhalation:</u>	May cause dizziness.
<u>Ingestion:</u>	No known effects.
<u>NFPA Rating:</u>	Health- 1, Fire-1, Reactivity-0
<u>HMIS Rating:</u>	Health- 1, Flammability- 1, Reactivity- 0

HMIS limitation statement:

The HMIS hazard ratings numbers are meant to give a quick indication of the relative hazards associated with the product. All of the information contained in the SDS should be consulted to assist with the safe handling of this material.

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

First-aid measures general:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest; artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

Inhalation:

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

Eyes:

Flush eyes with water. Remove contact lenses if present and easy to do. Continue rinsing. Call a physician if irritation develops.

Skin:

Wash immediately with lots of water/ shower. Soap may be used. Remove clothing while washing.

Ingestion:

Never give anything by mouth to an unconscious person. Rinse mouth with water. Ingestion of large quantities; immediately to hospital. Call poison information center.

5. Fire-Fighting Measures

Fire-fighting procedures:

Wear self-contained breathing apparatus if necessary. Treat as burning oil. Keep drums as cool as possible to avoid expansion, explosions, and splattering.

Suitable extinguishing media:

Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (not alcohol-resistant).

Unsuitable extinguished media:

Water (quick-acting extinguisher, reel): risk of puddle expansion. Water: risk of puddle expansion.

Special hazards arising from the substance or mixture: DIRECT FIRE HAZARD; Not easily combustible. INDIRECT FIRE HAZARD; Temperature above flashpoint; higher fire/explosion hazard. May form carbon dioxide and carbon monoxide.

6. Accidental Release Measures

For non-emergency personnel: Protective equipment; Gloves. Protective clothing. Emergency procedures; Mark the danger area. No naked flames.

Steps to be taken in case material is spilled: Use personal protective equipment. Dike the spill and soak up with inert absorbent material and dispose of. Keep in suitable, closed containers for disposal. Wash floor with hot water solution. Remove contaminated clothing and wash before reuse.

Environmental Disposal Information: Prevent run-off into sewers or natural waterways.

Waste disposal: All containers should be effectively labeled to facilitate the appropriate disposal or reclaim.

7. Handling and Storage

Storage: Store in tightly sealed containers in dry, ambient temperature conditions and well ventilated place.

Empty Containers: Not available.

Precautions to be taken in handling: 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. Keep away from heat. Keep away from sources of ignition.

8. Exposure Controls / Personal Protection

Respiratory and personal protection: Respirators should be selected when TWA exceeded. Avoid hot vapors when mixing or packaging.

Exposure Controls: Not available.

Eye Protection: Wear safety glasses with side shields.

Skin protection: Wear impervious clothing, boots and apron as appropriate.

Hand protection: Handle with gloves.

Ventilation: 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.
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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>Softening Point, R&B:</u>	Not available.
<u>Solubility in Water:</u>	>1% Insoluble
<u>Flash Point, TAG CC F:</u>	Open Cup: 231 °C (448 °F) Closed Cup: 310°C (590°F).
<u>Percent Volatiles (by weight):</u>	Not available.
<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>	> 250 °C (> 482 °F)
<u>Refractive Index 25°C:</u>	Not available.
<u>Freezing point:</u>	0°C (32°F)
<u>Melting point:</u>	0°C (32°F) 5°C
<u>Relative density:</u>	0.997 g/mL
<u>Auto ignition Temperature, °C:</u>	Not available.
<u>Flammable Limits, %(V):</u>	Not available.

10. Stability and Reactivity

<u>Stability:</u>	Stable under normal conditions.
<u>Incompatibility (Materials to Avoid):</u>	Strong oxidizing agents, acids, alkalis.
<u>Conditions to Avoid:</u>	Excess heat.
<u>Hazardous Polymerization:</u>	Will not occur under normal circumstances.

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:</u>	LD50= >20 g/kg (Rabbit) LD50= >20000 mg/kg [Rabbit]
<u>Oral:</u>	LD50 = 22.5 g/kg (rat) LD50 = 22500 mg/kg [Rat]. Rat (male and female) > 5,000 mg/kg (OECD Test Guideline 401)
<u>Inhalation:</u>	No data available
<u>Skin corrosion/irritation:</u>	Skin - Rabbit Result: Mild skin irritation
<u>Serious eye damage/eye irritation:</u>	Rabbit Result: Mild eye irritation (OECD Test Guideline 405)
<u>Respiratory or skin sensitisation:</u>	Maximisation Test (GPMT) - Guinea pig Result: Does not cause skin sensitisation. (OECD Test Guideline 406)
<u>Germ cell mutagenicity:</u>	Mouse, lymphocyte, Result: negative
<u>Reproductive toxicity:</u>	No data available.
<u>Specific target organ toxicity:</u>	No data available.

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).
<u>Bioaccumulative potential:</u>	No data available.
<u>Mobility in soil:</u>	No data available.

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>	Not regulated.
<u>IATA:</u>	Not regulated.

15. Regulatory Information

All components of this material are on the TSCA Inventory.

All components of this material are on the Canadian DSL.

<u>SARA 302 Components:</u>	No chemicals in this material need to be reported.
<u>SARA 313 Components:</u>	This material does not contain any chemical components that need to be reported.
<u>SARA 311/312 Hazards:</u>	No SARA Hazards.
<u>California Proposition 65:</u>	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
<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>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 user's 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.