



Michael Ballance Plastics Limited

SPECIALISTS IN PLASTICS & CHEMICALS

Material Safety Data Sheet

MONSOL ESBO

1. Product Identification

Product Name: MONSOL ESBO

Chemical Name: Epoxidized Soybean Oil

Application of the Substance: Plasticiser

Company Identification

Supplier: Michael Ballance Plastics Limited, "Office Afloat", Barton Marina, Barton under Needwood, Burton on Trent, Staffordshire, DE18 8DZ, UK

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2. Hazards Identification

Hazard description: Not applicable

Information concerning particular hazards for human environment: This product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system: The classification is according to the latest edition of the EU-lists, and extended by company and literature data.

3. Composition/Information on Ingredients

Chemical characterisation

Chemical components:

CAS: 8013-07-8

EINECS: 232-319-0

Epoxidized soybean oil

ESBO 100%

Additional information: For the wording of the listed risk phrases refer to section 16.

4. First Aid Measures

General information: Remove any clothing that is soiled by the product.

After inhalation: Not likely to occur.

After skin contact: Wash skin thoroughly with soap and water.

After eye contact: While keeping the eyes open, rinse under running water.

After swallowing: Rinse out the patient's mouth and then give to drink plenty of water or milk.

If a large quantity has been ingested, get medical attention.

5. Fire Fighting Measures

Suitable extinguishing agents: Foam, dry chemical and CO₂

Protective equipment: Wear self-contained respiratory protective device.

Product name: Epoxidized Soybean Oil: Wear fully protective suit.

Additional information: In case it is impossible to remove the materials from the origin of fire, abundant water spray should be used to cool fire exposed building or structures exposed fire prevent the fire from spreading and extinguish it.

6. Accidental Release Measures

Person-related safety precautions: Ensure adequate ventilation and wear protective equipment. Keep any unprotected people away.

Measures for environmental protection: Do not allow this material to enter the sewers or ground water. Inform respective authorities in case of seepage into water course or sewage system.

Measures for cleaning/collecting: Absorbs with earth, sand or other similar material.

7. Handling and Storage

Information for safe handling: Keep handling area and processing equipment clean.

Spills: Material is slippery-avoid accidents. **Disposal:** Refer to local Waste Disposal Authority.

Storage: Drums should be stored above 10°C to avoid "winterising" in cold weather.

Do not store at temperatures above 45°C. Under low temperature environment, storage tanks or vessels shall be equipped with heating instrument.

8. Exposure Controls/Personal Protection

Personal protective equipment:

General protective and hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection: Normally not necessary at room temperature.

Protection of hands: Protective gloves

Ingredients with limit values that require monitoring at the workplace: 8031-07-8 Epoxidized Soybean Oil ESBO

Material of gloves: Vinyl or neoprene

Not suitable are gloves made of the following materials: PVC gloves

Product name: Epoxidized Soybean Oil

Eye protection: Safety goggles

9. Physical and chemical properties

10. Stability and reactivity

Thermal decomposition / conditions to be avoided: Avoid temperature above 240°C.

11. Toxicological information

Acute toxicity: Acute oral effects: The oral LD 50 for rats is 23 g/kg. Acute inhalation effects: May be irritating to the respiratory tract.

Sub chronic effects: No relevant information found. **Sensitization:** No relevant information found.

Chronic Toxicity or delayed Toxicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA. No skin allergy was observed in guinea pigs following repeated exposure. Long-term dietary administration to rats produced increased mortality, reduced body weight gains, kidney and liver changes (enlarged, fatty infiltration of the liver), degeneration of the testes, and slight changes in the uterus. No genetic changes were observed in tests using bacteria and human or animal cells.

Mutagenicity: This product was negative in the Ames test.

Genotoxicity: No relevant information found.

General Information

Form: Liquid

Colour: Light Yellow

Odour: mild oily

Change in condition

Melting point/Melting range: 5°C

Boiling point/Boiling range: > 150°C at 5mmHg

Flash point: 280°C min
Vapour pressure: No data available
Density: 0.982~1.002 g/cm³ at 25°C/4°C
Solubility in / Miscibility with water at 20°C: Insoluble
pH-value (- g/l) : neutral
Viscosity:
Dynamic at 25°C: 390°C-poise

12. Ecological information

Ecotoxicity: This material is practically non-toxic to brine shrimp (24-hr LC50: 240mg/l)
LC50 (fish): 900 mg/l/48H, (*Leuciscus idus*) Negligible hazard potential.
Persistence and degradability: Rate of biodegradation 64.8% after 28 days.
Bio accumulative potential: No data available.

13. Disposal considerations

Recommended Methods for Safe and Environmentally Preferred Disposal: Incineration.
Precautions for waste disposal: Dispose in accordance with laws and regulations.

14. Transport information

UN number: Not applicable
UN classification number: Not applicable
Transport hazard class: Not a hazardous or restricted item for transport by road, rail, sea or air.
Packaging group: Not applicable
Marine pollution: Not applicable
Specific precautionary transport measures and conditions: Not applicable

15. Regulatory information

Applicable Regulations:
Toxic chemicals control act: Registered
Toxic substances: Not registered
Very toxic substances: Not registered
Industrial safety hygiene's law, Specified chemicals regulation: Not Classified
Solvent regulation: Not Classified
Fire service law: Class 4 Flammable liquid (4th oil substance).

National information

Commission Directive 2005/79/EC relating to plastic materials & articles intended to come into contact with food: The specific migration limit (SML) of epoxidized soybean oil (ESBO) found in PVC gaskets - which are used to seal glass jars. EFSA suggested that the SML for ESBO is 30 mg/kg of food.

Tsca inventory: Registered

Einecs inventory: Registered

Einecs No: 232-391-0

This substance is not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93 on the evaluation and control of the risks of existing substances).

Classification and Labelling Information: This substance is not classified in the Annex I of Directive 67/548/EEC as such, but it may be included in one of the group entries. Substances not listed either individually or in group entries must be self classified.

Export and Import of Dangerous Chemicals (Regulation (EEC) No 304/2003) Information: This substance is not listed in the Annex I of Council Regulation No (EC) 304/2003

NFPA Ratings:

Health hazard: 1

Flammability: 1

Reactivity: 1

Specific hazard: None

Label Hazard Warning: Not applicable

16. Other information

Disclaimer:

Michael Ballance Plastics Limited provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.