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1 Article and manufacturer information

Item name: Epoxidized Soybean Oil

Product Number: 072

Details of the Supplier of the safety data sheet: Novus Dahle GmbH
Hessenweg 53, 49811 Lingen (Ems)

Emergency contact number/Fax number: +49 591 / 9140 - 0

2 Component identification data

Pure substance: 99,5 %

English names: Epoxidized Soybean Oil(ESO)

Chemical formula: C57H106O10

CAS No.: 8013-07-8

Hazardous substance composition(Percentage composition): 99,5 %

3 Hazard identification data

Health hazard effects: irritation of the eyes, skin and respiratory tract.

Environmental impact: biodegradable in the natural environment

Transparent yellowish tasteless liquid, Boiling point/boiling point range: 386°C

Flash point: 285°C

Autoignition temperature: 393°C
Fire sources should be avoided.
The main hazard is fire.

Special harm: irritates eyes, skin and respiratory tract.

Main symptoms: Liquid or vapor can irritate the eyes, Eating will cause vomiting, diarrhea, serious collapse phenomenon.

4 First aid measures

- INHALATION:**
1. Move the patient to fresh air immediately.
 2. If the patient stops breathing, give artificial respiration.
 3. Keep the patient warm and rested.
- SKIN CONTACT:**
1. Wash skin immediately with soap or detergent and water.
 2. If it penetrates your clothes, remove them immediately and wash your skin with soap or a neutral cleanser and water.
 3. Go for immediate diagnosis.
- EYE CONTACT:**
1. Immediately open eyelids and rinse eyes with plenty of water for more than 15 minutes.
 2. Go for immediate diagnosis if irritation persists.
- INGESTION:** Go for immediate diagnosis.
- The most important symptoms and harmful effects:** Bitter
- First-Aid Personal Protection:** Wear protective gloves, to avoid exposure to contaminants.
- Notes to physicians:** When swallowed, gastric lavage and activated carbon should be considered.

5 Fire Fighting Measure

- Suitable Extinguishing Media:** Carbon dioxide, chemical powder, foam.
- Water extinguishing or water mist cooling is permitted only under safety conditions. Leakage and waste water should be collected and treated, not to pollute the environment.
- Special Extinguish Procedure:**
1. Remove container from fire when it is safe.
 2. Do not disperse the leak with a high-pressure column of water.
 3. Avoid breathing combustion gas.
 4. Stay in the wind and away from the lowlands.
 5. Extinguishing with water and water mist may cause blistering.

6 Leak treatment method

Personal Protection: People without protective equipment and clothing are not allowed to enter the leaking and leaking areas until they have been cleaned up.

Environmental Precautions:

1. Remove all sources of ignition.
2. Ventilate the leaking area.

Methods for cleaning up:

1. Any leakage and pollutants should be collected and treated, not to pollute the environment.
2. In case of small amount of liquid leakage, absorb with paper towel and place in appropriate container.
3. When large quantities of liquid are released, absorb them with vermiculite, dry sand, clay, or similar material and place them in appropriate containers.
4. The liquid can be collected by an appropriate vacuum system. When using a vacuum system, there should be no ignition source near the leakage area and anti-tempering equipment should be provided.

7 Handling and Storage

Handling:

1. When not in use and empty containers should also be kept closed.
2. Avoid collision damage to container.

Storage:

1. Store in a cool, dry, well-ventilated area away from direct sunlight and away from incompatible materials, heat sources and ignition sources.
2. Store in appropriate, labeled containers.
3. Appropriate use of tanks, buildings, storage rooms and storage cabinets approved by inspection.

8 Exposure controls measures

Engineering control: Local exhaust.

Mean allowable concentration of 8-hour daily dose: 5 mg/M3

Average allowable concentration for short time: 10 mg/M3

Breath protection:

1. Pressure supply or positive pressure comprehensive air supply respirator supplemented by pressure supply or positive pressure air respirator (self-contained respirator)
2. Pressure supply or positive pressure comprehensive air respirator (self-contained respirator)

Hand protection: Impervious gloves.

Eye protection:

1. Splash-proof safety eye shield
2. Full face mask.
3. Don't wear contact lenses.
4. The DEHP's operating area should be equipped with eye bath equipment.

Skin and body protection: Impervious clothing.

Hygienic measure:

1. Take off contaminated clothes as soon as possible after work and wash them before wearing or throwing them away Laundry personnel must be informed of the hazards of contaminants.
2. Smoking or eating is strictly prohibited in the workplace.
3. Wash hands thoroughly after handling the product.
4. Keep the workplace clean.

9 Physical and chemical properties

State of matter:	liquid
Shape:	Transparent yellowish tasteless liquid
Colour:	Transparent light yellow, oily
Smell:	Tasteless
Boiling point/boiling point range:	386°C
Flash Point:	285°C
Test method:	Closed cup
Vapour pressure:	0 .0 1 mmHg @20°C
Vapor density:	16
Density:	0.9851 (Water=1)
Solubility:	0.005g/100ml (Water)

10 Stability and reactivity

Stability: Stable under normal conditions

Possible adverse reactions under special conditions:

1. Nitrates, strong oxidants: fire and explosion hazards.
2. Strong base, strong acid: incompatible substances.

Conditions to be avoided: heat, ignition sources

Substances to be avoided:

1. Nitrates.
2. strong oxidant.
3. Alkali.
4. Acid.

11 Toxicological Information

Urgent toxicity:	<ol style="list-style-type: none">1. Irritates eyes, skin and respiratory tract.2. The droplets and vapors produced by heating may cause irritation, cough, sore throat, and nausea.
LD50(Test animals, absorption pathways):	30,000 mg/kg (Rats, swallow)
LC50(Test animals, absorption pathways):	-
Local effect:	500 mg/24 (Rabbits, skin) cause slight irritation. 500 mg/24H (Rabbits, eyes) cause slight irritation.
Sensitive:	The human skin test showed no allergic effect.
Slow toxicity or long term toxicity:	Causes central nervous suppression.
Special effects:	7140 mg/Kg (Female, 1-21 days pregnant, swallowed) cause embryo poisoning.

12 Ecological information

Possible environmental impacts/environmental distribution:

1. Test shows, in the aerobic condition of the lake, it will decompose rapidly.
2. When released into the soil, it either evaporates or seeps into the ground.
3. When released into water, it breaks down quickly.
4. When released into the atmosphere, it is carried far away in the troposphere, where it can be washed down by rain.
5. Highly toxic to aquatic organisms.

13 Waste disposal method

Waste disposal method:

In compliance with the relevant environmental regulations

1. incinerate.
2. Specific sanitary burial methods may be considered.

14 Shipping information

Domestic transport regulations:

1. Rules for the carriage of dangerous goods by water (motc)
2. Regulations for the carriage of dangerous goods by motor vehicles (motc)
3. Regulations on the management of the transport of dangerous goods (mor)
4. Regulations for the administration of traffic safety in inland waters

15 Regulation Information

Applicable regulations and standards: [Environmental protection law of the People's Republic of China]
[Regulations on safety management of hazardous chemicals]
[List of dangerous goods] (GB6944-86)
[Occupational exposure limits for workplace hazards] (GBZ2-2002)
[Regulations governing the transport of dangerous goods]

16 Other Information

Reference: International chemical safety card (international chemical safety programme, commission of the European communities)

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