SAFETY DATA SHEET

Bis(2-ETHYLHEXYL)TEREPHTHALATE (Dioctyl terephthalate)
Revision: 1  Last up date : 15.01.2011  Date issued: 22.10.2010  page.1/8

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Substance Identification

<table>
<thead>
<tr>
<th>Trade name</th>
<th>Bis-(2-ethylhexyl)terephthalate (Dioctylterephthalate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IUPAC name</td>
<td>Bis(2-ethylhexyl)terephthalate</td>
</tr>
<tr>
<td>EC#</td>
<td>229-176-9</td>
</tr>
<tr>
<td>CAS #</td>
<td>6422-86-2</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C24H38O4</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>390</td>
</tr>
<tr>
<td>REACH Registration number</td>
<td>Registration dead line 31.05.2013 in according to tonnage band</td>
</tr>
<tr>
<td>Chemical characterization</td>
<td>Mono-constituent substance, organic</td>
</tr>
</tbody>
</table>

1.2. Relevant identified uses of the substance or mixture and uses advised against
Plasticizer in plastics and rubber processing.

1.3. Details of the supplier of the safety data sheet

<table>
<thead>
<tr>
<th>Name</th>
<th>S.C. OLTCHIM S.A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>1 Uzinei Street, 240050 Ramnicu Valcea, Romania</td>
</tr>
<tr>
<td>Phone N°</td>
<td>+40 250 701 200</td>
</tr>
<tr>
<td>FAX N°</td>
<td>+40 250 735 030</td>
</tr>
<tr>
<td>E-mail of competent person responsible for SDS in the MS or in the EU:</td>
<td><a href="mailto:tehnic@oltchim.ro">tehnic@oltchim.ro</a></td>
</tr>
</tbody>
</table>

1.4. Emergency telephone

<table>
<thead>
<tr>
<th>European Emergency N°:</th>
<th>112</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency telephone at the company:</td>
<td>+40/250/738141</td>
</tr>
<tr>
<td>Available outside office hours:</td>
<td>24h/day/365days</td>
</tr>
</tbody>
</table>

Issued by: Technical-Development Department
2. HAZARD IDENTIFICATION

2.1. Classification of the substance
2.1.1. Classification according to Regulation (EC) 1272/2008
Bis-(2-ethylhexyl)terephthalate is not classified according to Regulation (EC) 1272/2008 (GHS).

2.1.2 Classification according to Directive 67/548/EEC
Bis-(2-ethylhexyl)terephthalate is not classified according to Directive 67/548/EEC

2.2. Label elements
2.2.1. Labeling according to Regulation (EC) 1272/2008
Signal word: No signal word
No label according to Regulation (EC) 1272/2008.

2.2.2. Labeling according to Directive 67/548/EEC
No label according to D 67/548/EEC.

2.3 Other hazard

Health effects
Skin Contact: Repeated or prolonged skin contact may cause skin irritation.
Eye contact: May cause slight eye irritation of susceptible persons.
Inhalation: low vapor pressure & high viscosity makes inhalation of vapor or mist unlikely.
Long term contact with substance may cause dizziness.
Environmental effects: It is degraded by the hydroxyl radicals present in atmosphere. The product doesn’t present bioaccumulation potential.
Emergency overview: Low hazard for usual industrial or commercial handling.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>PBT/ vPvB</th>
<th>CAS no/EC No/REACH No.</th>
<th>Classification according to Reg (EC) No. 1272/2008</th>
<th>Classification according to D 67/548/EEC</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Izomers of Di-octyl-terephthalate, min.</td>
<td>No/No</td>
<td>6422-86-2/229-176-9</td>
<td>-</td>
<td>-</td>
<td>Min. 99.5</td>
</tr>
</tbody>
</table>
4. FIRST - AID MEASURES

Inhalation: Remove from contaminated area promptly. If breathing stops, administer artificial respiration and seek medical aid promptly.

Skin: Wash with soap and plenty water over 15 minutes. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered. Seek medical assistance.

Eyes: Wash eyes with plenty water over 15 minutes, holding eyelids open. Seek medical assistance promptly if there is irritation.

Ingestion: Product ingestion may cause gastrointestinal irritation. Give plenty water to dilute product. Do not induce vomiting. Keep victim quiet. If vomiting occurs, lower victim’s head below hips to prevent inhalation of vomited material. Never give anything by mouth to an unconscious person. Seek medical help promptly.

Special measures: In case of spillage of eyes and face, treat eyes firstly.

5. FIRE - FIGHTING MEASURES

Suitable extinguishing media: Water spray, dry chemical and carbon dioxide

Unsuitable extinguishing media: None.

Exposure hazards: Combustible. The vapor is heavier than air and will accumulate in low area. Heat from fire can generate flammable vapor. Use water-spray to cool fire exposed containers. Prevent entry into sewers and watercourses of the wastes resulted from fire.

Protection of fire-fighters: Wear full protective clothing and self contained breathing apparatus with full face piece operated in positive pressure mode.
SAFETY DATA SHEET

Bis(2-ETHYLHEXYL)TEREPHTHALATE (Diocylterephthalate)

Revision: 1  Last up date: 15.01.2011  Date issued: 22.10.2010  Page. 4/8

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Evacuate the personnel that do not participate to the intervention. Persons performing clean-up work should wear adequate personal protective equipment and a self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Ventilate area of leak or spill.

Environmental precautions: Isolate the contaminated area. Ventilate area order to from contamination the ground and the surface water by isolating the hazard area. Avoid the open flames, sparks and smoking in the area.

Methods of cleaning up: Collect and recovery the liquid when is possible. Absorb spills with an inert sorbent (vermiculite, sand) and store into closed waste container.

Special precautions: Do not use combustible materials, such as saw dust. Do not flush to sewer!

7. HANDLING AND STORAGE

Handling: Handling the product in accordance with industrial hygiene practices and with safety requirements.

Storage: Store in metallic containers/drums perfectly closed, in a cool, dry environment, away from open flame and oxidising agents.

Specific use: Avoid prolonged exposure of containers to heat. May exists fire risk; evaporate the wastes under nitrogen blanket protection system. Grounded equipment using bis(2-ethylhexyl)terephthalate.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits:
- Long term exposure limit, 8 hours -
- Short term exposure, 15 minutes. -

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.
SAFETY DATA SHEET


Bis(2-ETHYLHEXYL)TEREPHTHALATE (Dioctylterephthalate)

Revision: 1  Last up date: 15.01.2011  Date issued: 22.10.2010  Page: 5/8

**Engineering control:** A system of local and/or general exhaust is recommended to keep employee exposure as low as possible. Local exhaust ventilation is generally preferred because it can control the emission of the contaminant at its sources, preventing dispersions of it into the general work area.

**Personal protective equipment**

**Respiratory protection:** In case of permanent exposure is recommended using of breathing apparatus filtering organic compounds. For emergencies or instances where the exposure levels are not known, use a full face piece positive pressure air-supplied respirator.

**Hand protection:** Wear rubber gloves (exclude PVC)

**Eye protection:** Use chemical safety goggles. Avoid use of lenses.

**Skin protection:** Wear impervious protective clothing, including boots, gloves, lab coat apron or coveralls as appropriate, to prevent skin contact

**Other precautions:** Maintain shower, eye wash fountain and quick-drench facilities in work area.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

**General information**

Appearance: Liquid with characteristic odor

**Important health, safety and environmental information**

- **pH, at 20°C:** none
- **Boiling point:** 400°C
- **Flash point:** 238°C - closed cup
- **Explosive properties:** Explosion limits - none
- **Oxidizing properties:** It is not oxidizing agent
- **Vapour pressure (217°C):** 1.33mbar
- **Relative density (water=1):** 0.984
- **Water solubility:** 14 mg/l (at 20°C)
- **Also soluble in:** acetone, ethanol, aromatic hydrocarbons
- **Dynamic viscosity:** 63 CP (at 25°C)

**Other information**

- **Melting point:** -48°C
- **Autoignition temperature:** not known

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.
10. STABILITY AND REACTIVITY

Chemical stability: Stable under ordinary conditions of use and storage in closed containers.
Condition to avoid: Heating at high temperatures.
Materials to avoid: Strong oxidizers, strong bases
Hazardous decomposition products: Carbon monoxide and dioxide may form when heated to decomposition. The product may produce irritating fume when is heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Animal toxicity data
LD₅₀/oral-rat >5000 mg / kg

Acute toxicity
Inhalation: irritant for the respiratory system.
Skin contact: It causes skin irritation
Eye contact: It causes eye irritation.
Ingestion: It causes gastro-intestinal irritation.
Chronic effects: Prolonged exposure to the substance alters the reproductive function and can produce target organs damages.

CMR effects:
Carcinogenicity: Not classifiable as carcinogenetic by IARC.
Mutagenicity: Not classifiable as mutagenic.
Toxicity for Reproduction: Not classifiable as toxic for reproduction.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Mobility: Bis-(2-ethylhexyl)terephthalate is present in air at very low concentration due to the very low value of vapour pressure and Henry constant. Due to its low solubility, it is absorbed by organic materials existing in soil and sediments form the natural water.
Persistence and degradability: Released into the air the product is degraded by reaction with photochemically produced with hydroxil radicals with a half-life of 17,5 ore. Do not hydolizing in water.

Bioaccumulative potential: this product is not a bioaccumulator

Other adverse effects: No other information.

Do not allow to enters waters, waste water or soil!

13. DISPOSAL CONSIDERATIONS

Waste treatment: What ever cannot be saved for recovery or recycling should be handled as non-hazardous waste and sent to an approved incinerator or disposed in an approved waste facility. Dispose of contaminated product, container residues and spill clean up materials in accordance with federal, state and local requirements.

Packaging treatment: The empty containers, tank cars and tank trucks are treated with steam and rinsed with plenty of hot water. The resulted effluents are treated in the same way as waste. The empty and clean containers are to be reused in conformity with regulations

14. TRANSPORT INFORMATION

Bis-(2-ethylhexyl)terephthalate has not specific regulations of transportation.

15. REGULATORY INFORMATION


16. OTHER INFORMATION

Technical control: Avoid the direct contact with the substance.

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.
Administrative control: Avoid the exposure to the substance of persons with hepatic affections or alcoholic.

Interdictions: Do not eat and drink in the working area.
Do not smoke in the working area.

Working with open fire: It is allow only after applying of prevention measures, based on working with fire permit issued in accordance with the fire protection legislation.

Security marks: Place visible security indicators: NO SMOKING and NO OPEN FIRE in the working area.