

Thirumalai Chemicals Limited

Branch Code: 04 - Chemidye Manufacturing Company

MATERIAL SAFETY DATA SHEET

Product Name: DIETHYL PHTHALATE

Revision Date: 23.10.2008

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1. Manufacturer and Supplier Identification

Thirumalai Chemicals Limited,
25 - B SIPCOT Industrial Complex,
Ranipet, 632 403.Tamil Nadu, India.
Phone : + 91 - 4172 - 244441 / 244442 / 244446
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2. Composition / Information on ingredient

Chemical Name : 1,2- Benzenedicarboxylic acid, diethyl ester
Chemical Formula : $C_6H_4(COOC_2H_5)_2$
Molecular Weight : 222.24
CAS No. : 84-66-2
EEC (EINECS) No. : 201-550-6

3. Hazard Identification

Harmful if swallowed or inhaled, irritating to eyes, respiratory system and skin.
Target organs : Central nervous system. May cause narcotic effects
R-Phrases : R36/37/38
Hazard Symbol : Xi - Irritant

4. First Aid Measures

General advice : Special treatment by a doctor may be required as soon as possible, in case of exposure to the substance or its vapor.
Eye contact : Rinse thoroughly with plenty of water for at least 15 minutes. Consult a physician.
Skin contact : Remove contaminated clothing. Wash the skin with soap and plenty of water. Get medical aid if irritation develops or persists.
Ingestion : Clean mouth with water. Drink plenty of water or milk. Do not induce vomiting. Call a physician immediately.
Inhalation : Move victim to fresh air at once. If breathing is difficult, give oxygen. Get medical aid.

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5. Fire Fighting Measures

- Special hazards : Flash point: 161⁰ C. Combustible material. Above the flash point, explosive vapor-air mixtures may be formed. Gives off irritating or toxic fumes
- Extinguishing agents : Water spray, dry chemical, alcohol foam or carbon dioxide.
- Protective equipment : In case of fire, wear self-contained breathing apparatus and chemical protection suit.

6. Accidental Release Measures

- Personal precautions : Ensure adequate ventilation. Use personal protective equipment. Remove all sources of ignition.
- Environmental precautions : Do not allow material to contaminate ground water system.
- Methods for cleaning up : Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with and inert material. (e.g., vermiculite, dry sand, earth) and place in a chemical waste container. Do not use combustible materials, such as sawdust. Do not flush to sewer. Dispose of in compliance with local and national regulations.

7. Handling and Storage

- Handling : Ensure adequate ventilation, especially in confined area. Avoid contact with eyes and skin. Wash thoroughly after handling.
- Storage : Keep in tightly closed container. Store in cool, dry, ventilated area, away from sources of ignition. Protect against physical damage.

8. Exposure Controls / Personal Protection

Occupational exposure Limits (OELs)

ACGHI Threshold Limit Value (TLV) : 10 ppm, 5 mg/m³ (TWA)

Engineering measures to reduce exposure

- : Ensure adequate ventilation confined area. Local exhaust ventilation is generally preferred as it can control the emissions at its source.

Personal Protective Equipment

- Respiratory : Self contained breathing apparatus
- Eye : Closely fitted Safety goggles.
- Hand : Impervious Gloves
- Skin and body : Approved work boots, protective clothing
- Hygiene measures : Wash hands before food and at the end of workday.
- Other devices : Maintain eye wash facility in work area

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9. Physical and Chemical Properties

Form	: Liquid
Colour	: Clear, Colorless
Odour	: Odorless
Freezing/Melting point	: -3 ⁰ C
Boiling point	: 298 - 299 ⁰ C @ 760 mm Hg
Flash- point	: 161 ⁰ C
Auto-ignition temperature	: 457 ⁰ C
Volatiles by Volume	: 100% @ 21 ⁰ C
Vapour pressure	: 14 mm @ 163 ⁰ C
Vapour Density	: 7.66 (Air = 1)
Viscosity	: 12 CPS @ 20 ⁰ C
Specific gravity	: 1.23 @ 14C/4C
Water Solubility	: 0.09% by vol. @ 25 ⁰ C

10. Stability and Reactivity

Stability	: Stable at normal conditions
Incompatibilities with other materials	: Strong acids such as nitric acid, strong oxidizing agents and permanganates. DEP will attack some forms of plastics, rubber and coatings.
Hazardous decomposition Products	: Carbon monoxide, Carbon dioxide
Hazardous polymerization	: Will not occur

11. Toxicological Information

Acute toxicity (lethal doses) (Literature value)

LD50/oral/ rat dose	: 8600 mg/kg
LD50/oral/mouse	: 6172 mg/kg
LD50/oral/rabbit	: 1 gm/kg
Carcinogenicity	: Not listed by ACGHI, IARC, NIOSH, NTP, OSHA
Effects of short-term exposure	: The substance irritates the eyes and the skin

12. Ecological information

Environmental fate	: When released into the soil, Diethyl Phthalate may evaporate and biodegrade to a moderate extent. When released into water, it may biodegrade to a moderate extent but is not expected to evaporate significantly. This material has an experimentally determined bio-concentration factor (BCF) of less than 100. When released into the air, it is expected to be readily degraded by reaction with photo-chemically produced hydroxyl radicals. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. When released into the air, it is expected to have a half-life of less than 1 day.
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