Egyplast for chemical industries

Material Safety Data Sheet

Dibutyl phthalate MSDS

Section 1: Chemical Product and Company Identification

Product Name: Dibutyl phthalate

Catalog Codes: SLD1414

CAS#: 84-74-2

RTECS: TI0875000

TSCA: TSCA 8(b) inventory: Dibutyl phthalate

CI#: Not available.

Synonym: Benzene-o-dicarboxylic acid di-n-butyl ester; Di-n-butyl phthalate; Dibutyl 1,2-benzenedicarboxylate; Dibutyl o-phthalate; n-Butylphthalate

Chemical Name: Phthalic acid, dibutyl ester

Chemical Formula: C16-H22-O4

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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Dibutyl phthalate	84-74-2	100

Toxicological Data on Ingredients: Dibutyl phthalate: ORAL (LD50): Acute: 7499 mg/kg [Rat]. 3474 mg/kg [Mouse]. 10000 mg/kg [Guinea pig]. DERMAL (LD50): Acute: >20000 mg/kg [Rabbit]. MIST (LC50): Acute: 25000 mg/m 2 hours [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of eye contact (irritant). Slightly hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, the nervous system, liver, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 402°C (755.6°F)

Flash Points: CLOSED CUP: 157°C (314.6°F). (TAG) OPEN CUP: 191°C (375.8°F) (Cleveland).

Flammable Limits: LOWER: 0.5%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Slightly flammable to flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Absorb with an inert material and put the spilled material in an appropriate waste disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Avoid contact with eyes. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids, alkalis.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 5 (mg/m3) from OSHA (PEL) [United States] TWA: 5 (mg/m3) from ACGIH (TLV) [United States] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid. (Viscous liquid.)

Odor: Ester (Slight.)

Taste: Bitter. (Strong.)

Molecular Weight: 278.34 g/mole

Color: Colorless to light yellow.

pH (1% soln/water): Not available.

Boiling Point: 340°C (644°F)

Melting Point: -35°C (-31°F)

Critical Temperature: 500°C (932°F)

Specific Gravity: 1.0465 (Water = 1)

Vapor Pressure: 0 kPa (@ 20°C)

Vapor Density: 9.58 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 4.9

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether, acetone.

Solubility:
Soluble in diethyl ether, acetone. Very slightly soluble in cold water. Solubility in water: 13 mg/l @ 25 deg. C. Soluble in benzene, alcohol, most organic solvents and oils.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with oxidizing agents, acids, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 3474 mg/kg [Mouse]. Acute dermal toxicity (LD50): >20000 mg/kg [Rabbit]. Acute toxicity of the mist (LC50): 25000 mg/m 2 hours [Rat]. 3

Chronic Effects on Humans: May cause damage to the following organs: kidneys, the nervous system, liver, central nervous system (CNS).

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May cause adverse reproductive effects and birth defects (teratogenic). May affect genetic material (mutagenic)

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: May cause skin irritation, stinging and burning sensation. It can cause dermatitis. It can be absorbed by the skn Eyes: Splash contact can cause immediate, severe stinging pain, and profuse tearing. Inhalation: It can irritate the nose and throat. It may affect behavior/central nervous system (headache, drowsiness, hallucinations, ataxia, somnolence, seizures). It may cause nausea. Ingestion: May cause nausea, vomiting. It may affect behavior/central nervous system (headache, drowsiness, hallucinations, ataxia, somnolence, seizures), liver(hepatomegaly, increased liver enzymes), and kidneys (nephritis), blood (normocytic anemia, leukopenia), respiration (dyspnea), metabolism (anorexia, weight loss. May also cause conjunctivitis and edema of the eyelids. Chronic Potential Health Effects: Ingestion: Prolonged or repeated ingestion may have symptoms similar to that of acute ingestion.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 9: Miscellaneous hazardous material.

Identification: : Environmentally hazardous substance, liquid, n.o.s. (Dibutyl phthalate) UNNA: 3082 PG: III

Special Provisions for Transport: Marine Pollutant

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut hazardous material survey.: Dibutyl phthalate Illinois toxic substances disclosure to employee act: Dibutyl phthalate Illinois chemical safety act: Dibutyl phthalate New York release reporting list: Dibutyl phthalate Rhode Island RTK hazardous substances: Dibutyl phthalate Pennsylvania RTK: Dibutyl phthalate Minnesota: Dibutyl phthalate Massachusetts RTK: Dibutyl phthalate Massachusetts spill list: Dibutyl phthalate New Jersey: Dibutyl phthalate New Jersey spill list: Dibutyl phthalate Louisiana spill reporting: Dibutyl phthalate California Director's List of Hazardous Substances: Dibutyl phthalate TSCA 8(b) inventory: Dibutyl phthalate TSCA 8(a) IUR: Dibutyl phthalate TSCA 8(d) H and S data reporting: Dibutyl phthalate: Effective Date: 10/4/82; Sunset Date: 10/4/92 SARA 313 toxic chemical notification and release reporting: Dibutyl phthalate CERCLA: Hazardous substances.: Dibutyl phthalate: 10 lbs. (4.536 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):
R50- Very toxic to aquatic organisms. R61- May cause harm to the unborn child. R62- Possible risk of impaired fertility. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S53- Avoid exposure - obtain special instructions before use. S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 0

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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