

1. PRODUCT NAME: Dibutyl Phthalate
2. CHEMICAL NAME: Dibutyl Phthalate
3. SYNONYMS:
4. CAS NUMBER: 84-74-2
5. COMPOSITION: Dibutyl Phthalate (84-74-2)
Weight %: 100%

IN CASE OF
TRANSPORT EMERGENCY
CONTACT CHEMTREC
USA: 1-800-424-9300
INTERNATIONAL: 1-703-527-3887

6. PROPERTIES: PHYSICAL FORM: Liquid
COLOR/ODOR: Colorless and Odorless
SPECIFIC GRAVITY @ 20 C (68 F) (water=1): 1.05
VAPOR PRESSURE @ 20 C (68 F): 0.0000189 mbar (0.0000142 mmHg)
VAPOR DENSITY (Air=1): 9.6
EVAPORATION RATE: Negligible
BOILING POINT: 340 C (644 F)
MELTING POINT: -35 C (-31 F)
VISCOSITY: Not available
SOLUBILITY IN WATER: 11.2 mg/L (negligible)
PH: Not available
OCTANOL/WATER PARTITION COEFFICIENT: Log P = 4.79, P = 61660
FLASH POINT (Cleveland open cup): 191 C (375 F)
LOWER EXPLOSIVE LIMIT @ 236 C (457 F): 0.47 volume %
UPPER EXPLOSIVE LIMIT: Not available
AUTOIGNITION TEMPERATURE (ASTM D2155): 404 C (759 F)
SENSITIVITY TO MECHANICAL IMPACT: Insensitive at 100 kg-cm
STABILITY: Stable.
INCOMPATIBILITY: Material can react with strong oxidizing agents.
HAZARDOUS POLYMERIZATION: Will not occur.
HAZARD IDENTIFICATION
HIGH ORAL DOSES OF THIS MATERIAL CAUSE ADEVERSE REPRODUCTIVE EFFECTS IN
LABORATORY ANIMALS.
HMIS HAZARD RATINGS:
Health: 1
Flammability: 1
Chemical Reactivity: 0
NFPA HAZARD RATINGS:
Health: 0
Flammability: 1
Chemical Reactivity: 0
NOTE: HMIS and NFPA ratings involved data and interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

7. HAZARDS: Health: 1
Flammability: 1
Chemical Reactivity: 0



Carolina International Sales Co., Inc

MATERIAL SAFETY DATA SHEET

2522 Plantation Center Drive
Matthews, NC 28105
(704) 845 9440

www.ciscochem.com

8. FIRE FIGHTING INFORMATION: EXTINGUISHING MEDIA: Water spray, dry chemical, carbon dioxide (CO₂), foam
SPECIAL FIRE-FIGHTING PROCEDURES: Wear self-contained breathing apparatus and protective clothing.
HAZARDOUS COMBUSTION PRODUCTS: carbon dioxide, carbon monoxide
UNUSUAL FIRE AND EXPLOSION HAZARDS: None
9. PERSONAL PROTECTION MEASURES: VENTILATION: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be match to conditions. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.
RESPIRATORY PROTECTION: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn.
RESPIRATOR TYPE: Mist. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.
EYE PROTECTION: It is good industrial hygiene practice to minimize eye contact.
SKIN PROTECTION: It is a good industrial hygiene practice to minimize skin contact.
RECOMMENDED DECONTAMINATION FACILITIES: Eye bath, washing facilities.
10. FIRST AID PROCEDURES: INHALATION: If symptomatic, move to fresh air. Get medical attention if symptoms persists.
EYES: Any material that contracts the eye should be washed out immediately with water.
SKIN: Wash with soap and water. Get medical attention.
INGESTION: Seek medical advice.
11. EXPOSURE LIMITS: ACGIH THRESHOLD LIMIT VALUE (TLV): 5 mgm/m³ TWA
OSHA PERMISSIBLE EXPOSURE LIMIT: 5 mgm/m³ TWA
12. TOXICOLOGICAL INFORMATION: EFFECTS OF EXPOSURE:
GENERAL: High oral doses of this material given to pregnant animals produced some minor abnormalities in their offspring. However, high doses to humans handling this material are not expected since oral consumption is not a likely route of significant exposure. Because this material does not evaporate readily and is not easily absorbed through the skin, it is not expected to produce such effects in humans through inhalation or skin exposure when handled in a manner consistent with the precautionary measures contained in this material safety data sheet.
INHALATION/EYES/SKIN: Low Hazard for usual industrial handling or commercial handling by trained personnel.
INGESTION: High oral doses of this material cause adverse reproductive effects in laboratory animals.
ACUTE TOXICITY DATA:
Oral LD-50 (rat): 20-25 g/kg
Inhalation LC-50: Not available
Dermal LD-50 (guinea pig): >2 mL/kg (highest dose tested)
Dermal LD-50 (rabbit): >20 mL/ kg (highest dose tested)
Skin irritation (guinea pig): Slight
Skin irritation (rabbit): None
Eye irritation (human): Slight
SUBCHRONIC TOXICITY DATA:
Dermal Study (90 days, rabbit): LOEL = 4200 mg/kg/day (target organ effects: kidney); NOEL = 2100 mg/kg/day
Oral study (9 days, mouse): LOEL = 2000 mg/kg/day (target organ effects: testes) (only dose tested): .
Oral study (21 days, rat): LOEL = 624 mg/kg/day (minor target organ effects: liver); NOEL = not established.
Oral study (35-45 days, rat): LOEL = 2500 mg/kg/day (target organ effects: testes); LOEL = 250 mg/kg/day (target organ effects: liver) reduced body weight gain): NOEL = 250 mg/kg/day (testes)



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Oral study (90 days, rat): NOAEL = 120 mg/kg/day (minor target organ effects: liver); NOEL = not established.

Oral study (105 days, mouse): NOAEL = 1300 mg/kg/day (minor target organ effects: liver); NOEL = 390 mg/kg/day/

CHRONIC TOXICITY DATA:

Oral study (1 year, rat): NOEL = 0.125% in diet (only concentration tested)

DEVELOPMENTAL TOXICITY DATA:

Oral study (mouse): LOEL for maternal toxicity = 2100 mg/kg/day; NOEL for maternal toxicity = 660 mg/kg/day, NOEL for teratogenicity = 660 mg/kg/day; LOEL for embryo/fetotoxicity = 350 mg/kg/day

Oral study (rat): LOEL for embryo/fetotoxicity = 600 mg/kg/day; NOEL for developmental toxicity = 120 mg/kg/day

REPRODUCTIVE TOXICITY DATA:

Oral study (mouse): LOEL for embryo/fetotoxicity = 1300 mg/kg/day; NOEL for developmental toxicity = 390 mg/kg/day

Dermal absorption rate (human, in vitro): 6.6 micrograms/cm²/hour

Dermal absorption rate (human, in vitro): 0.07 micrograms/cm²/hour

MUTAGENICITY/GENOTOXICITY DATA:

Cell transformation assay: negative

Chromosomal aberration assay: equivocal

Mitotic recombination (*Saccharomyces cerevisiae*) assay: negative (=/-activation)

Mouse lymphoma assay: positive (= activation), negative (- activation)

Salmonella typhimurium assay (Ames test): negative

13. ECOLOGICAL INTRODUCTION

INFORMATION: This environmental effects summary is written to assist in addressing emergencies created by an accidental spill which might occur during the shipment of this material, and in general, it is not meant to address discharges to sanitary sewers or publically owned treatment works.

Data for this material have been used to estimate its environmental impact. It has the following properties: a moderate biochemical oxygen demand and may cause oxygen depletion in aqueous systems, a high potential to affect some aquatic organisms, a low potential to affect the germination and/or early growth of some plants, a low potential to be affected to biodegrade and is not expected to persist for long periods in an aquatic environment.

After dilution with a large amount of water, followed by secondary waste treatment, this material is not expected to cause adverse environmental effects.

OXYGEN DEMAND DATA:

THOD: 2.24 g oxygen/g

COD: 1.71 g oxygen/g

BOD-5: 0.34 g oxygen/g

BOD-5: 0.43 g oxygen/g

ACUTE AQUATIC EFFECTS DATA:

96-h LC-50 (fathead minnow): 0.92 mg/L

96-h LC-50 (rainbow trout): 1.6 mg/L

96-h LC50 (sheepshead minnow): 0.60 mg/L

96-h LC-50 (bluegill sunfish): 0.85 mg/L

48-h EC-50 (daphnid): 3.4 mg/L

CHRONIC AQUATIC EFFECTS DATA:

28-d Daphnid survival and reproduction test: LEOC: 2.5 mg/L, NOEC: 0.96 mg/L, MATC: 1.5 mg/L

60-d early life-stage toxicity test (rainbow trout): LEOC: 0.19 mg/L, NOEC: 0.10 mg/L, MATC: 0.14 mg/L.

BIODEGRADATION: A 28-day test for ready biodegradability using unacclimated micro-organisms showed >80% degradation of the test article as measured by carbon dioxide evolution.



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7-Day Plant Germination Effects – No-adverse effect concentration:

Ryegrass: 100 microliter (s) /1

Radish: 100 microliter (s)/1

Lettuce: 100 microliter (s)/1

7-Day Plant Seedling Effects – No adverse effect concentration:

Marigold: 1000 microliter (s)/1

Radish: 1000 microlites (s)/1

Corn: 1000 microliter (s)/1

Lettuce: 1000 microliter (s)/1

14. DISPOSAL CONSIDERATIONS: Discharge, treatment, or disposal may be subject to National, State, or local laws. Incinerate.

15. CARCINOGENIC PROPERTIES & NOTIFICATIONS: CARCINOGENICITY CLASSIFICATION (COMPONENTS PRESENT AT 0.1% OR MORE): Chemical subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: dibutyl phthalate

16. TRANSPORT INFORMATION: DOT (USA) STATUS:

Regulated. Marine pollutant, net quantities less than 4.5 kg (10.0 lbs) are not regulated; the following requirements apply to larger quantities:

Class 9, packing group III

DOT Reportable Quantity: 10.0 lb (4.5 kg)

AIR-INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO)

ICAO Status: Net quantities less than 4.5 kg (10 lbs) are not regulated; the following requirements apply to larger quantities.

Class 9, packing group III

SEA-INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)

IMDG Status: Marine pollutant, net quantities less than 4.5kg (10 lbs) are not regulated; the following requirements apply to larger quantities:

Class 9, packing group III

17. HANDLING & STORAGE: PERSONAL PRECAUTIONARY MEASURES: Do not taste or swallow. Wash thoroughly after handling.

PREVENTION OF FIRE AND EXPLOSION: Keep from contact with oxidizing materials.

STORAGE: Keep container closed.

18. ACCIDENTAL RELEASE MEASURES: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. For large spills, flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams.

19. REGULATORY INFORMATION: This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200. OSHA hazardous chemicals: dibutyl phthalate

WHMIS Ingredient Disclosure list: dibutyl phthalate

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SARA (U.S.A.) Sections 311 and 312 hazard classifications: delayed (chronic) health hazard

U.S Toxic Substances Control Act (TSCA): This product is listed on the TSCA inventory or otherwise complies with TSCA premanufacture notification requirements.