**Material Safety Data Sheet**

**DIOCTYL PHTHALATE**

**SECTION 1. PRODUCT AND COMPANY DESCRIPTION**

## Company Information:

Miami Chemical 2 NE 40th Avenue Suite 501

Miami, FL 33137

## Emergency Phone Numbers:

For emergencies involving a spill, leak, fire, or exposure InfoTrac (800) 535-5053

\*\*\*Contact manufacturer for all non-emergency calls

## Product Information:

(305) 370-3170

## Chemical Name:

Dioctyl Phthalate

## Synonyms:

DOP

**SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS**

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| --- | --- | --- |
| **Component** | **Percentage** | **CAS#** |
| Dioctyl Phthalate | >100% | 117-81-7 |

**SECTION 3. HAZARDS IDENTIFICATION**

# Emergency Overview

## Warning Statements:

CAUTION:

Contains a suspect carcinogen.

Avoid contact with the skin, eyes and clothing. Avoid inhalation of mists/vapors.

Use with local exhaust ventilation.

Wear a NIOSH-certified (or equivalent) organic vapor respirator. Wear safety glasses with side-shields.

Wear chemical resistant protective gloves. Wear protective clothing.

Eye wash fountains and safety showers must be easily accessible.

State of matter: liquid Color: colorless Odor: mild

# Potential Health Effects:

## Primary routes of exposure:

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

## Acute Toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation.

## Irritation / corrosion:

Not irritating to the skin. Not irritating to the eyes.

## Sensitization:

Skin sensitizing effects were not observed in animal studies.

## Carcinogenicity:

In long-term studies in rodents exposed to high doses, a tumorigenic effect was found; however, these results are thought to be due to a rodent-specific liver effect that is not relevant to humans. The International Agency for Research on Cancer (IARC) has classified this substance as group 3, not classifiable as to its carcinogenicity to humans. NTP listed carcinogen

## Repeated dose toxicity:

Repeated exposure to high doses of the substance causes reversible liver changes in rodents. According to present knowledge, these effects do not occur in man.

## Reproductive toxicity:

The results of animal studies suggest a fertility impairing effect.

## Teratogenicity:

The substance caused malformations/developmental toxicity in laboratory animals. Indications of possible developmental toxicity/teratogenicity were seen in animal studies.

## Genotoxicity:

Most of the results from the numerous studies available show no evidence of a mutagenic effect.

## Aquatic toxicity:

No toxic effects occur within the range of solubility. There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

## SECTION 4. FIRST AID MEASURES

**General Advice:**

Remove contaminated clothing.

## If inhaled:

Keep patient calm, remove to fresh air. If breathing difficulties develop, aid in breathing and seek immediate medical attention.

## If on skin:

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

## If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open. Seek medical attention.

## If swallowed:

Rinse mouth immediately and then drink plenty of water, seek medical attention.

## Note To Physician:

All treatments should be based on observed signs and symptoms of distress.

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| **SECTION 5. FIRE FIGHTING MEASURES** |
| **Fire Hazard Data:** |
| Flash point: Autoignition: Flammability:Self-ignition temperature: | 201 °C370 °Cdoes not ignite | (DIN 51758, closed cup) (DIN 51794)(other)(other) not self-igniting |

## Suitable extinguishing media:

carbon dioxide, dry extinguishing media, water, foam

## Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

## Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

## General Information:

Use proper personal protective equipment as indicated in Section 8.

## Personal precautions:

Handle in accordance with good industrial hygiene and safety practice.

## Environmental precautions:

Do not empty into drains.

## Cleanup:

For small amounts: Spills should be contained, solidified, and placed in suitable containers for disposal. For large amounts: Pump off product.

**SECTION 7. HANDLING AND STORAGE**

## Handling:

**General advice:**

Ensure thorough ventilation of stores and work areas.

## Protection against fire and explosion:

Avoid all sources of ignition: heat, sparks, open flame.

## Storage: General advice:

Keep container tightly closed.

## Storage incompatibility:

General advice: Segregate from strong oxidizing agents.

**SECTION 8. EXPOSURE CONTROL / PERSONAL PROTECTION**

## Introductory Remarks:

These recommendations provide general guidance for handling this product. Because work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and conduct regular repairs. Waste from these procedures should be handled in accordance with Section 13.

## Advice on system design:

Provide local exhaust ventilation to control vapors/mists.

## Respiratory protection:

Wear respiratory protection if ventilation is inadequate. W ear a NIOSH-certified (or equivalent) organic vapor/particulate respirator as needed. Observe OSHA regulations for respirator use.

## Hand protection:

Wear chemical resistant protective gloves.

## Eye protection:

Safety glasses with side-shields.

## Body protection:

Body protection must be chosen based on level of activity and exposure.

## General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Avoid inhalation of mists. Avoid contact with the skin, eyes and clothing.

## Work Practice Controls:

Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

1. Do not use, and /or consume foods, beverages, tobacco products, or cosmetics in area where this material is stored.
2. Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
3. Wash exposed skin promptly to remove accidental splashes or contact with this material.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form:**

Liquid

## Odor:

Mild

## Color:

Colorless

## pH Value:

N/A

## Melting Point:

-55 °C ( 1,013 hPa) (other) Literature data.

## Boiling Point Range:

385 °C ( 1,013 hPa) (other) Cannot be distilled without decomposition at normal pressure. Literature data.

## Vapor Pressure:

(calculated) negligible

## Density:

0.9622 g/cm3

## Partitioning coefficient noctanol/ water (log Pow):

7.6

## Viscosity, dynamic:

79 mPa.s ( 20 °C)

17 mPa.s ( 50 °C)

50 mPa.s ( 28 °C)

## Particle size:

The substance / product is marketed or used in a non solid or granular form.

## Solubility in water:

0.285 mg/l

## Solubility (qualitative):

soluble

## Molar mass:

390.56 g/mol

**SECTION 10. STABILITY AND REACTIVITY**

## Conditions to avoid:

Avoid all sources of ignition: heat, sparks, open flame.

## Substances to avoid:

strong oxidizing agents

## Hazardous reactions:

The product is chemically stable.

## Decomposition products:

Possible decomposition products: carbon oxides

## Thermal decomposition:

No decomposition if used as directed.

## Corrosion to metals:

Corrosive effects to metal are not anticipated.

## Oxidizing properties:

not fire-propagating (other)

**SECTION 11. TOXICOLOGICAL INFORMATION**

## Acute Toxicity

**Oral:**

Type of value: LD50 Species: rat

Value: > 20,000 mg/kg Literature data.

## Inhalation:

Type of value: LC50 Species: rat

Value: > 10.62 mg/l Exposure time: 4 h

An aerosol was tested. Literature data.

## Dermal:

Type of value: LD50 Species: rabbit

Value: > 24,500 mg/kg Literature data.

## Irritation / Corrosion Skin:

Species: rabbit Result: non-irritant

Method: OECD Guideline 404

## Eye:

Species: rabbit Result: non-irritant

Method: OECD Guideline 405

**Sensitization:** Buehler test Species: guinea pig

Result: Non-sensitizing.

Method: Guideline 92/69/EEC, B.6 Literature data.

**Fish:**

Acute:

Flow through.

Pimephales promelas/LC50 (96 h): > 0.67 mg/l Literature data.

## Aquatic invertebrates

Acute:

OECD Guideline 202, part 1 static Daphnia magna/EC50 (48 h): > 100 mg/l

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. The details of the toxic effect relate to the nominal concentration.

Daphnia magna/EC50 (48 h): > 0.16 mg/l

## Aquatic plants

Toxicity to aquatic plants:

ETAD method, modified OECD Guideline 201 green algae/EC50 (72 h): > 130 mg/l

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. green algae/EC50 (96 h): > 0.1 mg/l

## Microorganisms

Toxicity to microorganisms:

DIN EN ISO 8192-OECD 209-88/302/EEC,P. C aerobic

activated sludge: > 2,000 mg/l

## Degradability / Persistence Biological / Abiological Degradation

Test method: OECD 301B; ISO 9439; 92/69/EEC, C.4-C (aerobic) Method of analysis: CO2 formation relative to the theoretical value Degree of elimination: 70 - 80 %

Evaluation: Readily biodegradable (according to OECD criteria). Readily biodegradable (according to OECD criteria).

## Bioaccumulation

Fathead minnow Bioconcentration factor 840

The product may be accumulated in organisms. Literature data.

## Other adverse effects:

Do not release untreated into natural waters.

**SECTION 13. DISPOSAL CONSIDERATIONS**

## Waste disposal of substance:

Dispose of in a licensed facility. Do not discharge substance/product into sewer system. Dispose of in accordance with national, state and local regulations.

## Container disposal:

Empty containers with less than 1 inch of residue may be landfilled at a licensed facility.

**DOT:**

Proper Shipping Name: Not a DOT controlled material (United States). UN#: N/A

Class:

Packing Group:

**SECTION 15. REGULATORY INFORMATION**

## California Prop 65:

WARNING! This product contains a chemical known in the State DIOCTYL PHTHALATE of California to cause birth defects or other reproductive harm.

## SARA Hazard Classification:

Acute Health Hazard Chronic Health Hazard

## SARA 313 Component(s):

DIOCTYL PHTHALATE

## Notification Status:

Australia. Industrial Chemical (Notification and Assessment) Act: y (positive listing) Canada. Canadian Environmental Protection Act (CEPA).: y (positive listing) Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133): y (positive listing) China. Inventory of Existing Chemical Substances: y (positive listing)

Japan. Kashin-Hou Law List: y (positive listing)

US. Toxic Substances Control Act: y (positive listing) EU. EINECS: y (positive listing)

Korea. Toxic Chemical Control Law (TCCL) List: y (positive listing)

Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Ace: y (positive listing) Japan. Industrial Safety & Health Law (ISHL) List: y (positive listing)

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand: y (positive listing) Switzerland. Consolidated Inventory: y (positive listing)

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|  | **SECTION 16. OTHER INFORMATION** |  |
| **HMIS Hazard Ratings:** |  |  |
| Health 1Flammability 1Physical Hazards 0 | 0=Insignificant 1=Slight 2=Moderate | 3=High 4=Extreme |
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