Material Safety Data Sheet
DIBUTYL PHTHALATE

Section 1 - Product Identification

Synonyms : n-Butyl phthalate, Phthalic acid dibutyl ester, DBP
Molecular Weight : 278.34 g/mol
Chemical Formula : $C_{16}H_{22}O_4$
Company Identification : Tradeasia International Pte. Limited
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Relevant identified uses of the substance or mixture and uses advised against
Identified uses : Laboratory chemicals, Manufacture of substances

Section 2 – Composition/Information on Ingredients

Component	Classification	Concentration
Dibutyl phthalate		
CAS-No. 84-74-2 EC-No. 201-557-4	Repr. 1B; Aquatic Acute 1; H360, H400 M-Factor - Aquatic Acute: 1	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 15.

Section 3 – Hazards Identification

3.1 GHS Classification

Reproductive toxicity (Category 1B), H360
Acute aquatic toxicity (Category 1), H400
For the full text of the H-Statements mentioned in this Section, see Section 15.

3.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)
H360 May damage fertility or the unborn child.
H400 Very toxic to aquatic life.

Precautionary statement(s)
Prevention

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P391 Collect spillage.

Storage
P405 Store locked up.

Disposal
P501 Dispose of contents/ container to an approved waste disposal plant.

Restricted to professional users.

3.3 Other hazards - none

Section 4 – First-Aid Measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 3.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5 – Fire Fighting Measures

5.1. Suitable Extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Specific hazards arising from the chemical
Carbon oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

Section 6 – Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
Evacuate personnel to safe areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

Section 7 – Handling and Storage

7.1 Precautions for safe handling
Avoid exposure - obtain special instructions before use.Avoid inhalation of vapour or mist. For precautions see section 3.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1 no other specific uses are stipulated

Section 8 – Exposure Controls/Personal Protection

8.1 Control parameters
Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Dibutyl phthalate	84-74-2	PEL (long term)	5 mg/m3	Singapore. Workplace Safety and Health Act - First Schedule Permissible Exposure Limits of Toxic Substances

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact
Material: Nature latex/chloroprene
Minimum layer thickness: 0,6 mm
Break through time: 480 min
Material tested:Lapren®

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 77 min
Material tested:Dermatril®
test method: EN374

Body Protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9 – Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Form: liquid, clear Colour: colourless
Odour	No data available
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	Melting point/range: -35 °C - lit.
Initial boiling point and boiling range	340 °C - lit.
Flash point	171.0 °C - closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	Lower explosion limit: 0,47 %(V)
Vapour pressure	1.0 mmHg at 147,0 °C
Vapour density	No data available
Relative density	1.043 g/cm^3 at 25 °C
Water solubility	0.0114 g/l at 25 °C - OECD Test Guideline 105 - slightly soluble
Partition coefficient: noctanol/ water	No data available
Auto-ignition temperature	402.0 °C
Decomposition temperature	No data available
Viscosity	18.8 mm^2/s at 20 °C
Explosive properties	No data available
Oxidizing properties	No data available

9.2 Other safety information

No data available

Section 10 – Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials
Strong oxidizing agents, Nitrates, Bases, acids, Chlorine

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

Section 11 – Toxicological Information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 8.000 mg/kg(Dibutyl phthalate)
LC50 Inhalation - Rat - 4.250 mg/m3(Dibutyl phthalate)
LD50 Dermal - Rabbit - > 20.860 mg/kg(Dibutyl phthalate)

Skin corrosion/irritation
Skin - Rabbit(Dibutyl phthalate)
Result: No skin irritation
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit(Dibutyl phthalate)
Result: No eye irritation
(OECD Test Guideline 405)

Respiratory or skin sensitisation
Maximisation Test - Guinea pig(Dibutyl phthalate)
Result: Does not cause skin sensitisation.
(OECD Test Guideline 406)

Germ cell mutagenicity
No data available(Dibutyl phthalate)

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
Presumed human reproductive toxicant(Dibutyl phthalate)
Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.(Dibutyl phthalate)

Specific target organ toxicity - single exposure
No data available(Dibutyl phthalate)

Specific target organ toxicity – repeated exposure
No data available

Aspiration hazard
No data available(Dibutyl phthalate)

Additional Information
RTECS: TI0875000

Nausea, Dizziness, Headache, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Dibutyl phthalate)
Central nervous system - (Dibutyl phthalate)

Section 12 – Ecological Information

12.1 Toxicity

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 0,85 mg/l - 96,0 h(Dibutyl phthalate) NOEC - Pimephales promelas (fathead minnow) - 0,32 mg/l - 96,0 h(Dibutyl phthalate)
Toxicity to daphnia and other aquatic invertebrates	LC50 - Daphnia magna (Water flea) - 3,7 mg/l - 48 h(Dibutyl phthalate)

12.2 Persistence and degradability

Biodegradability Result:	81 % - Readily biodegradable. (Regulation (EC) No. 440/2008, Annex, C.4-C)

12.3 Bioaccumulative potential

Bioaccumulation	Pimephales promelas (fathead minnow) - 11 d - 0,0348 mg/l(Dibutyl phthalate) Bioconcentration factor (BCF): 2.165 Remarks: Does not bioaccumulate.

12.4 Mobility in soil
No data available(Dibutyl phthalate)

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
Very toxic to aquatic life.
No data available

Section 13 – Disposal Considerations

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

Section 14 – Regulatory Information

14.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
No data available

Section 15 - Additional Information

Full text of H-Statements referred to under sections 2 and 3.
H360 May damage fertility or the unborn child.
H400 Very toxic to aquatic life.

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