

SAFETY DATA SHEET



Revision date: 22-Feb-2024

Revision Number 6

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name DIBUTYL PHTHALATE

Product Code(s) 000032002401

Other means of identification

UN number or ID number 3082

CAS No. 84-74-2

Synonyms Di-n-butyl phthalate; Phthalate dibutyl; Phthalic acid, dibutyl ester; DBP; 1,2-Benzenedicarboxylic acid dibutyl ester; Dibutyl 1,2-benzenedicarboxylate.

Recommended use of the chemical and restrictions on use

Recommended use Plasticizer.

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier

Ixom Operations Pty Ltd (Incorporated in Australia)
NZBN: 9429041465226 Address: 166 Totara Street
Mt Maunganui South
New Zealand

Telephone Number: +64 9 368 2700

Facsimile: +64 9 368 2710

For further information, please contact

Contact Point Product Safety Department

Emergency telephone number

Emergency Telephone 0 800 734 607 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

GHS Classification

SIGNAL WORD

Danger

Additives, Process Chemicals and Raw Materials (Subsidiary Hazard) Group Standard 2020
Approval Number: HSR002503

Serious eye damage/eye irritation	Category 2
Reproductive toxicity	Category 1B
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 3

Label elements



Hazard statements

H319 - Causes serious eye irritation
H360Df - May damage the unborn child. Suspected of damaging fertility
H400 - Very toxic to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Avoid breathing dust / fume / gas / mist / vapours / spray
Avoid contact during pregnancy/while nursing
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid release to the environment

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other hazards which do not result in classification

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%
Dibutyl phthalate	84-74-2	>60 - <=100

4. FIRST AID MEASURES

Description of first aid measures

General advice

For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

Inhalation

Remove to fresh air. Call a physician if symptoms occur.

Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water. Call a physician if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed

Symptoms Irritation. May cause redness and tearing of the eyes.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE FIGHTING MEASURES**Suitable Extinguishing Media**

Suitable Extinguishing Media Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal protein foam can be used.

Unsuitable extinguishing media Water.

Specific hazards arising from the chemical

Specific hazards arising from the chemical Combustible liquid. Environmentally hazardous.

Hazardous combustion products Carbon oxides.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Hazchem code •3Z

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Personal precautions Avoid contact with skin and eyes. Avoid breathing vapors or mists. Stop leak if you can do it without risk. Do not touch or walk through spilled material. Ensure adequate ventilation. Evacuate personnel to safe areas. Use personal protective equipment as required. Wash thoroughly after handling.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Precautions to prevent secondary hazards

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin and eyes. Avoid breathing vapors or mists. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Use personal protection equipment. Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice. Not to be used by pregnant workers and workers who have recently given birth or who are breastfeeding.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep at temperatures between 5 °C and 35 °C. Keep container closed when not in use.

Incompatible materials Strong oxidizing agents. Strong acids. Strong alkalis. Nitrate compounds. Chlorine.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Dibutyl phthalate: WES-TWA 0.05 ppm

As published by the New Zealand Workplace Health & Safety Authority.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls

Engineering controls Ensure adequate ventilation, especially in confined areas. Apply technical measures to

comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES.



Eye/face protection

Goggles.

Hand protection

Impervious gloves. Do not use gloves made of polyvinyl chloride.

Skin and body protection

Wear suitable protective clothing. Protective shoes or boots. Overalls.

Respiratory protection

If determined by a risk assessment an inhalation risk exists, wear an organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Environmental exposure controls

No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	No information available
Color	Colourless
Odor	Characteristic
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not applicable	None known
Melting point / freezing point	-35°C	None known
Boiling point / boiling range	340°C	None known
Flash point	≥ 160°C	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	Not applicable	
Lower flammability or explosive limits	Not applicable	
Vapor pressure	0.1 kPa @ 142.9°C	None known

Vapor density	No data available	None known
Relative density	1.048 @ 25°C	None known
Water solubility	Immiscible in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	402°C	None known
Hyphen	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	16.3 mPa.s @25°C	None known

Other information**10. STABILITY AND REACTIVITY**Reactivity

Reactivity No information available.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

Hazardous polymerization Hazardous polymerization does not occur.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

Conditions to avoid Heat, flames and sparks. Direct sunlight.

Incompatible materials

Incompatible materials Strong oxidizing agents. Strong acids. Strong alkalis. Nitrate compounds. Chlorine.

Hazardous decomposition products

Hazardous decomposition products Carbon oxides.

11. TOXICOLOGICAL INFORMATIONAcute toxicityInformation on likely routes of exposure

Product Information No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

Inhalation Inhalation of vapors in high concentration may cause irritation of respiratory system.

Eye contact	Causes serious eye irritation.
Skin contact	May cause irritation.
Ingestion	May cause gastrointestinal discomfort if consumed in large amounts.
Symptoms	Irritation. May cause redness and tearing of the eyes.
Acute toxicity	
Numerical measures of toxicity	

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Dibutyl phthalate	= 7499 mg/kg (Rat)	> 20000 mg/kg (Rabbit)	>= 15.68 mg/L (Rat) 4 h

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	Not listed as carcinogenic according to IARC. (IARC - International Agency for Research on Cancer).
Reproductive toxicity	H360Df - May damage the unborn child. Suspected of damaging fertility.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.
Chronic effects:	<p>Chronic administration of dibutyl phthalate in test animals has caused adverse effects on fertility. Effects seen in adult rats include decreased success in reproductive outcomes and testicular changes in the male rats. Younger animals are more susceptible to dibutyl phthalate with adverse effects on the testes appearing at lower doses than for older animals.</p> <p>Recent studies in test animals suggest that dibutyl phthalate may have adverse effects on the unborn child when the mother is exposed during pregnancy. Effects have occurred in the male offspring only and the target system has been the genital system.</p> <p>There is limited evidence of a carcinogenic potential for this substance. Chronic studies in rats and mice indicate that oral administration of dibutyl phthalate causes liver damage and cancer. However, the mechanism for these effects is not considered relevant to humans.</p>

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity Keep out of waterways. Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Terrestrial ecotoxicity There is no data for this product.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Dibutyl phthalate	EC50: =1.2mg/L (72h, <i>Desmodesmus subspicatus</i>) EC50: =0.4mg/L (96h, <i>Pseudokirchneriella subcapitata</i>)	LC50: 0.71 - 1.2mg/L (96h, <i>Pimephales promelas</i>) LC50: 0.31 - 5.45mg/L (96h, <i>Pimephales promelas</i>) LC50: >1.24mg/L (96h, <i>Oncorhynchus mykiss</i>) LC50: 1.24 - 5.3mg/L (96h, <i>Oncorhynchus mykiss</i>) LC50: 1.38 - 1.74mg/L (96h, <i>Lepomis macrochirus</i>) LC50: 0.42 - 1.28mg/L (96h, <i>Lepomis macrochirus</i>)	EC50: =2.99mg/L (48h, <i>Daphnia magna</i>) EC50: =3.4mg/L (48h, <i>Daphnia magna</i>)

Persistence and degradability

Persistence and degradability Readily biodegradable.

Bioaccumulative potential

Bioaccumulation Material does not bioaccumulate. Bioconcentration Factor (BCF): >500.

Mobility

Mobility in soil No information available.

Chemical name	Partition coefficient
Dibutyl phthalate	4.79

Other adverse effects

Other adverse effects No information available.

Endocrine Disruptor Information

Chemical name	EU - Endocrine Disrupters Candidate List	EU - Endocrine Disrupters - Evaluated Substances	Endocrine disrupting potential
Dibutyl phthalate	Group I Chemical	High Exposure Concern	-

13. DISPOSAL CONSIDERATIONS**Waste treatment methods**

Waste from residues/unused products Dispose of product in packaging/container in a way that is consistent with the Hazardous Substances (Disposal) Notice 2017 and the Act, and Hazardous Substances (Amendments and Revocations) Notice 2020. Treat the chemical using a method that changes the characteristics or composition of the chemical so that the chemical is no longer a hazardous chemical; or export the chemical from New Zealand as waste. Class 9 chemical, if the chemical, or if it contains a component that is bioaccumulative and not rapidly degradable, then any component that is bioaccumulative and not rapidly degradable must be removed.

The product may only be discharged into the environment if an environmental exposure limit has been set for the chemical (or a component of the chemical); and the discharge does not, after reasonable mixing, result in the concentration of the substance in an environmental medium exceeding the environmental exposure limit.

Contaminated packaging

For packages that have been in direct contact with hazardous chemicals, the person must ensure that the package is rendered incapable of containing any chemical. It must be disposed of in a manner that is consistent with the requirements for disposal of the chemical that it contained, taking into account the material the package is manufactured from. Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous chemical (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the chemical to be classified as hazardous (class 6, 8, or 9 chemical).

14. TRANSPORT INFORMATION**ROAD AND RAIL TRANSPORT**

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

UN number or ID number

3082

Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIBUTYL PHTHALATE)

Transport hazard class(es)

9

Packing group

III

Hazchem code

•3Z

IATA

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN number

3082

UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIBUTYL PHTHALATE)

Transport hazard class(es)

9

Packing group

III

IMDG

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN number

3082

UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIBUTYL PHTHALATE)

Transport hazard class(es)

9

Packing group

III

IMDG EMS Fire

F-A

IMDG EMS Spill

S-F

Marine pollutant

Yes

15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture****New Zealand****National regulations**

See section 8 for national exposure control parameters

International Inventories

NZIoC	This material is listed on the New Zealand Inventory of Chemicals.
TSCA	Contact supplier for inventory compliance status.
DSL/NDL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	This material is listed on the Australian Inventory of Industrial Chemicals.

Legend:**NZIoC** - New Zealand Inventory of Chemicals**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AIIC**- Australian Inventory of Industrial Chemicals**International Regulations****The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable**The Stockholm Convention on Persistent Organic Pollutants** Not applicable**The Rotterdam Convention** Not applicable**16. OTHER INFORMATION**

Supplier Material Safety Data Sheet , not dated.

Prepared By This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).**Issuing Date:** 22-Feb-2024**Reason(s) For Issue:** 5 Yearly Revised Primary SDS**Revision Note:**

The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Disclaimer

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

End of Safety Data Sheet