



Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Di-n-butyl phthalate

SDS No. : 2244E-2

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Safety Management Dept. of Chemicals

Telephone number: +81-6-6946-8061

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2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Skin sensitization: Category 1

Reproductive toxicity: Category 1B

Specific target organ toxicity – single exposure: Category 3 (Respiratory tract irritation)

Specific target organ toxicity – repeated exposure: Category 1 (respiratory system)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 1

Hazardous to the aquatic environment (Long-term): Category 2

Label elements



Signal word: Danger

HAZARD STATEMENT

May cause an allergic skin reaction

May damage fertility or the unborn child

May cause respiratory irritation

Causes damage to organs through prolonged or repeated exposure (respiratory system)

Very toxic to aquatic life

Toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wash contaminated parts thoroughly after handling.

Wear protective gloves.

Contaminated work clothing should not be allowed out of the workplace.

Do not eat, drink or smoke when using this product.

Response

Collect spillage.

Get medical advice/attention if you feel unwell.



IF exposed or concerned: Get medical advice/attention.
Call a POISON CENTER or doctor/physician if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.

Storage

Store in a well-ventilated place. Keep container tightly closed.

Disposal

Dispose of contents/container in accordance with local/national regulation.

3. Composition/information on ingredients**Mixture/Substance selection:****Substance**

Ingredient name:Di-n-butyl phthalate

Content (%):98(min)

Chemical formula:C₆H₄[COO(CH₂)₃CH₃]₂

Chemicals No, Japan:3-1303

CAS No.:84-74-2

MW:278.35

ECNO:201-557-4

Note : The figures shown above are not the specifications of the product.

4. First-aid measures**Descriptions of first-aid measures****General measures**

Get medical attention/advice if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash with plenty of soap and water.

If skin irritation or rash occurs: 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.

IF SWALLOWED

Rinse mouth.

Call a POISON CENTER or doctor/physician if you feel unwell.

5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

In case of fire, use foam, dry powder, CO₂ to extinguish.

Unsuitable extinguishing media

Indoor firefighting equipment or outdoor firefighting equipment

Sprinkler equipment

Dry-powder firefighting equipment – except for phosphate etc.,hydrogen carbonate etc.

Straight stream water extinguisher



Water mist extinguisher
Reinforcing liquid jet extinguisher
Dry-powder extinguisher – except for phosphate etc.,hydrogen carbonate etc.
Bucket of water or tank of water

Specific hazards arising from the substance or mixture

Containers may explode when heated.
Fire may produce irritating, corrosive and/or toxic gases.

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.
Wear protective gloves/protective clothing/eye protection/face protection.
Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.
Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident

Collect spillage.

7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing or face protection.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Take off contaminated clothing and wash it before reuse.

Storage

**Conditions for safe storage**

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

Container and packaging materials for safe handling

Glass

Iron

8. Exposure controls/personal protection**Control parameters****Adopted value**

(Di-n-butyl phthalate)

ACGIH(1990) TWA: 5mg/m³ (Testicular dam; eye & URT irr)

OSHA-PEL

(Di-n-butyl phthalate)

TWA: 5mg/m³

Exposure controls**Appropriate engineering controls**

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures**Respiratory protection**

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

9. Physical and Chemical Properties**Information on basic physical and chemical properties**

Physical state: Liquid

Color: Colorless to light yellow

Odor: Practically odorless to characteristic odor

Melting point/Freezing point: -35°C

Boiling point or initial boiling point: (Di-n-butyl phthalate)340°C

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit:

Lower explosion limit: (at 235°C) 0.5 vol %

Upper explosion limit: 2.5 vol %

Flash point: (Di-n-butyl phthalate)(C.C.) 157°C

Auto-ignition temperature: (Di-n-butyl phthalate)402°C

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: 0.001g/100 ml (25°C)

n-Octanol/water partition coefficient: log Pow4.72

Vapor pressure: < 0.01kPa (20°C)

Density and/or relative density: 1.05

Relative vapor density (Air=1): 9.58

Relative density of the Vapor/air - mixture at 20°C (Air = 1): 1



No Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

As a result of flow, agitation, etc., electrostatic charges can be generated.

Decomposes on burning. This produces toxic and irritating fumes (phthalic anhydride).

Reacts with strong oxidants. (ICSC 0036)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Phthalic anhydride

11. Toxicological Information

Information on toxicological effects

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation data is not available.

Serious eye damage/irritation data is not available.

Sensitization

Skin sensitization

[GHS Cat. Japan, base data]

(Di-n-butyl phthalate)

cat. 1; JSOH recommendation, 2012

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity

[GHS Cat. Japan, base data]

(Di-n-butyl phthalate)

cat. 1B; CERI/NITE risk assessment, 2005

STOT

STOT-single exposure

[cat.3 (resp. irrit.)]

[GHS Cat. Japan, base data]

(Di-n-butyl phthalate)

respiratory tract irritation (ACGIH 7th, 2001)

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

(Di-n-butyl phthalate)

respiratory system (EU-RAR, 2004)

Aspiration hazard data is not available.



12. Ecological Information

Ecotoxicity

Aquatic toxicity

Very toxic to aquatic life

Toxic to aquatic life with long lasting effects

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(Di-n-butyl phthalate)

Fish (*Perca flavescens*) LC50=0.35mg/L/96hr (NITE primary risk assessment, 2005; CEPA, 1994; EU-RAR, 2003; EHC 189, 1997)

Hazardous to the aquatic environment (Long-term)

[GHS Cat. Japan, base data]

(Di-n-butyl phthalate)

Crustacea (Gammaridea) NOEC=0.10mg/L/10days (NITE primary risk assessment, 2005)

Water solubility

(Di-n-butyl phthalate)

0.001 g/100 ml (25°C) (ICSC, 2002)

Persistence and degradability

(Di-n-butyl phthalate)

BOD_Degradation : 69% (Registered chemicals data check & review); BOD5:COD ratio = 0.63 (EU-RAR, 2003)

Bioaccumulative potential

(Di-n-butyl phthalate)

log Pow=4.72 (ICSC, 2002)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Avoid release to the environment (- if this is not the intended use).

Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

UN No. or ID No.: 3082

UN Proper Shipping Name :

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Class or division (Transport hazard class) : 9

Packing group : III

ERG GUIDE No.: 171

Special provisions No.: 274; 331; 335; 375

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 3082

Proper Shipping Name :

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Class or division : 9

Packing group : III

Special provisions No.: 274; 335; 969

**IATA Dangerous Goods Regulations**

UN No.: 3082

Proper Shipping Name :

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Class or division : 9

Hazard labels : Miscellaneous & Environmentally hazardous

Packing group : III

Special provisions No.: A97; A158; A197; A215

Environmental hazards**MARPOL Annex III – Prevention of pollution by harmful substances**

Marine pollutants (yes/no) : yes

MARPOL Annex V – Prevention of pollution by garbage discharge

Reproductive toxicity: cat.1, 1A, 1B

Di-n-butyl phthalate

Specific target organ toxicity – repeated exposure: cat.1

Di-n-butyl phthalate

Hazardous to the aquatic environment – acute hazard: cat.1

Di-n-butyl phthalate

Hazardous to the aquatic environment – long-term hazard: cat.1, 2

Di-n-butyl phthalate

Maritime transport in bulk according to IMO instruments

Noxious Liquid ; Cat. X

Di-n-butyl phthalate

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemicals listed in TSCA Inventory

Di-n-butyl phthalate

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information**GHS classification and labelling**

Skin Sens. 1: H317 May cause an allergic skin reaction

Repr. 1B: H360 May damage fertility or the unborn child

STOT SE 3: H335 May cause respiratory irritation

STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure

Aquatic Acute 1: H400 Very toxic to aquatic life

Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects

Reference Book

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN

IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (62nd Edition) 2021

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2020 TLVs and BEIs. (ACGIH)

Supplier's data/information

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your



safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2019).