Date of issue: 31/07/2017
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Safety Data Sheet

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

Product identifier:
- Product name: Di-n-butyl tin oxide
- SDS No. : 2257E-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
- FAX: +81-6-6946-1607
- e-mail address: kagakuhinanzenkanri@kishida.co.jp

2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS
- Acute toxicity (Oral): Category 3
- Skin corrosion/irritation: Category 2
- Serious eye damage/eye irritation: Category 1
- Reproductive toxicity: Category 1B
- Specific target organ toxicity - single exposure: Category 1(central nervous system)
- Specific target organ toxicity - single exposure: Category 3 (Respiratory tract irritation)

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

Label elements

Signal word: Danger

HAZARD STATEMENT
- Toxic if swallowed
- Causes skin irritation
- Causes serious eye damage
- May damage fertility or the unborn child
- Causes damage to organs after single exposure(central nervous system)
- May cause respiratory irritation
- 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.
- Wear eye protection/face protection.

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

Response

Collect spillage.

IF exposed or concerned: Get medical advice/attention.

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

IF exposed or concerned: Call a POISON CENTER or doctor/physician.

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 occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Rinse mouth.

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 tin oxide

Content (%):95(min)

Chemical formula:$(C_4H_9)_2SnO$

Chemicals No, Japan:2-2031

CAS No.:818-08-6

MW:248.94

ECNO:212-449-1

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

4. First-aid measures

Descriptions of first-aid measures

General measures

IF exposed or concerned: Get medical advice/attention.

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.

Immediately call a POISON CENTER or doctor/physician.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

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 peace 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.

Avoid raising dust.

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

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.

Wear eye protection/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.
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
Polyethylene

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8. Exposure controls/personal protection

Control parameters

Adopted value

(Di-n-butyl tin oxide)
ACGIH(1995) TWA: 0.1mg-Sn/m3;
STEL: 0.2mg-Sn/m3 (Eye & URT irr; headache; nausea; CNS & immune eff)

Notation

(Di-n-butyl tin oxide)
Skin

OSHA-PEL

(Di-n-butyl tin oxide)
TWA: 0.1mg-Sn/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.

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9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Powder
Color: White
Odor: Slightly characteristic odor
Melting point/Freezing point: 105℃
Boiling point or initial boiling point: (Di-n-butyl tin oxide)161.9℃
Boiling range data is not available.
Flammability (gases, liquids and solids) data is not available.
Lower and upper explosion limit/flammability limit data is not available.
Flash point data is not available.
Auto-ignition temperature: (Di-n-butyl tin oxide)279℃
Decomposition temperature data is not available.
pH data is not available.
Kinematic viscosity data is not available.
Solubility:

Solubility in water: 3.9-4.2 mg/L (very poor)

n-Octanol/water partition coefficient: log Pow5.33 (calculated)
Vapor pressure: 0.000004 Pa (25℃)
Density and/or relative density: 1.5
Relative vapor density (Air=1) data is not available.
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
Dust explosion possible if in powder or granular form, mixed with air. If dry, it can be charged electrostatically by swirling, pneumatic transport, pouring, etc.
Decomposes on heating. This produces toxic fumes of tin and tin oxides. Reacts under certain circumstances with oxidants and bases. (ICSC 0256)
Conditions to avoid
Contact with incompatible materials.
Contact with fire source.
Incompatible materials
Bases, Oxidizing agents
Hazardous decomposition products
Tin, Tin oxides

11. Toxicological Information

Information on toxicological effects
Acute toxicity
Acute toxicity (Oral)
[GHS Cat. Japan, base data]
(Di-n-butyl tin oxide)
rat LD50=172mg/kg (SIDS, 2009)
Irritant properties
Skin corrosion/irritation
[GHS Cat. Japan, base data]
(Di-n-butyl tin oxide)
rabbit persistent erythema (SIDS, 2009)
Serious eye damage/irritation
[GHS Cat. Japan, base data]
(Di-n-butyl tin oxide)
rabbit not recover after 21 days (SIDS, 2009)
Allergenic and sensitizing effects data is not available.
Mutagenic effects data is not available.
Carcinogenicity
(Di-n-butyl tin oxide)
ACGIH-A4 : Not Classifiable as a Human Carcinogen
Reproductive toxicity
[GHS Cat. Japan, base data]
(Di-n-butyl tin oxide)
cat. 1B; SIDS, 2009
STOT
STOT-single exposure
[cat.1]

[GHS Cat. Japan, base data]
(Di-n-butyl tin oxide)
central nervous system (MOE risk assessment vol.8, 2010)
[cat.3 (resp. irrit.)]
[GHS Cat. Japan, base data]
(Di-n-butyl tin oxide)
respiratory tract irritation (SIDS, 2009)
STOT-repeated exposure data is not available.
Aspiration hazard data is not available.
Information on other hazards
May cause lung disorders by massive inhalation of powdered substance.
-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

12. Ecological Information

Ecotoxicity
Aquatic toxicity
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 tin oxide)
Crustacea (Daphnia magna) EC50=1.5mg DBTO/L/48hr (SIDS, 2006)
Water solubility
(Di-n-butyl tin oxide)
none (ICSC, 1994)
Persistence and degradability
(Di-n-butyl tin oxide)
Not degrade rapidly (BOD_Degradation: 0% (Registered chemicals data check & review, 1984))
Bioaccumulative potential
(Di-n-butyl tin oxide)
BCF=69 (Check & Review, Japan)
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.: 3146
UN Proper Shipping Name :
ORGANOTIN COMPOUND, SOLID, N.O.S.
Class or division (Transport hazard class) : 6.1
Packing group : III
ERG GUIDE No.: 153

Special provisions No.: 43; 223; 274

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 3146

Proper Shipping Name :

ORGANOTIN COMPOUND, SOLID, N.O.S.

Class or division : 6.1

Packing group : III

Special provisions No.: 43; 223; 274

IATA Dangerous Goods Regulations

UN No.: 3146

Proper Shipping Name :

ORGANOTIN COMPOUND, SOLID, N.O.S.

Class or division : 6.1

Hazard labels : Toxic

Packing group : III

Special provisions No.: A3; A5; A6

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 tin oxide

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

Di-n-butyl tin oxide

15. Regulatory Information

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

Chemicals listed in TSCA Inventory

Di-n-butyl tin oxide

Other regulatory information

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

16. Other information

GHS classification and labelling

Acute Tox. 3: H301 Toxic if swallowed

Skin Irrit. 2: H315 Causes skin irritation

Eye Dam. 1: H318 Causes serious eye damage

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

STOT SE 1: H370 Causes damage to organs after single exposure

STOT SE 3: H335 May cause respiratory irritation

Aquatic Acute 2: H401 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).