



## Safety Data Sheet

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

Product identifier:

Product name: Dibutyl hydroxytoluene

SDS No. : 2233E-4

Relevant identified uses of the substance or mixture and uses advised against

Research and Development

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

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

Division: Chemical Safety Management Department

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

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### Section 2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Serious eye damage/eye irritation: Category 2

Reproductive toxicity: Category 2

Specific target organ toxicity – single exposure: Category 1 (nervous system)

Specific target organ toxicity – repeated exposure: Category 2 (liver, lungs)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment, short-term (acute): Category 1

Hazardous to the aquatic environment, long-term (chronic): Category 1

(Note) GHS classification without description: Not classified/Classification not possible

Label elements



Signal word: Danger

HAZARD STATEMENT

H319 Causes serious eye irritation

H361 Suspected of damaging fertility or the unborn child

H370 Causes damage to organs (nervous system)

H373 May cause damage to organs through prolonged or repeated exposure (liver, lungs)

H410 Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

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

P273 Avoid release to the environment.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash contaminated parts thoroughly after handling.

P280 Wear eye protection/face protection.

P280 Use personal protective equipment as required.



P270 Do not eat, drink or smoke when using this product.

Response

P391 Collect spillage.

P314 Get medical advice/attention if you feel unwell.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor/physician.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/attention.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/national regulation.

Specific adverse human health effects

See "11. Toxicological Information".

### Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name	Content (%)	CAS No.	Chemicals No, Japan	Chemical formula
Dibutyl hydroxytoluene	99(min)	128-37-0	3-540; 9-1805	C <sub>15</sub> H <sub>24</sub> O

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

Impurities

Methanol  $\leq 0.10\%$  (CAS No.67-56-1)

2,4,6-Tri-tert-butylphenol  $\leq 0.0020\%$  (CAS No.732-26-3)

### Section 4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical advice/attention if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

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

IF ON SKIN

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

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/doctor/physician if you feel unwell.



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**Section 5. Fire-fighting measures**

## Extinguishing media

## Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

In case of fire, use water mist or loaded liquid, foam, inactive gases, dry powder, dry sand to extinguish.

\*Fire Service Act Combustible solids or synthetic resins

## Unsuitable extinguishing media

Extinguisher which discharge dry chemical fire extinguishing agents—Others (except for phosphates etc., hydrogen carbonates etc.)

\*Ministerial Ordinance for Enforcement of the Fire Service Act (Appended Table 2)

Combustible solids or synthetic resins

## Specific hazards arising from the substance or mixture

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

See "10.Stability and Reactivity".

## Advice for firefighters

## Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

## Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure mode.

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**Section 6. Accidental release measures**

## Personnel precautions, protective equipment and emergency procedures

Keep unauthorized personnel away.

Ventilate area until material pick up is complete.

Wear proper protective equipment.

## Environmental precautions

Prevent spills from entering sewers, watercourses, low areas or rivers. To be careful not discharged to the environment without being properly handled waste water contaminated.

## 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.

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**Section 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, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Exhaust/ventilator)



Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

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

Wear protective gloves/protective clothing/eye protection/face protection.

Wash hands et al thoroughly after handling.

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.

Storage

Conditions for safe storage

Keep container tightly closed.

Store locked up. (P405)

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

Storage in accordance with local/national regulation.

Container and packaging materials for safe handling

Use closed unbreakable containers.

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## Section 8. Exposure controls/personal protection

Control parameters

Control value and Concentration standard value

(Dibutyl hydroxytoluene)

Concentration standard value TWA: 10mg/m<sup>3</sup>

(Methanol)

Japan control value 200ppm

Adopted value

(Methanol)

JSOH(1963) 200ppm; 260mg/m<sup>3</sup>

(Other inorganic and organic dust (third class dust ))

JSOH Respirable dust 2mg/m<sup>3</sup>, Total dust 8mg/m<sup>3</sup>

(Dibutyl hydroxytoluene)

ACGIH(2001) TWA: 2mg/m<sup>3</sup>(IFV) (URT irr)

(Methanol)

ACGIH(2009) TWA: 200ppm;

STEL: 250ppm (Headache; eye dam; dizziness; nausea)

[ACGIH] Notation

(Methanol)

Skin

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



Recommend to use protective equipment in conformity with the standards.

Use appropriate protective equipment in accordance with local/national regulation.

#### Respiratory protection

Wear respiratory protection (dust-proof mask/gas mask). Select chemical cartridge corresponding to type of gases when using a gas mask.

#### Hand protection

Wear impervious protective glove.

#### Eye protection

Wear eye/face protection. Wear safety goggles in cases gas is generated.

#### Skin and body protection

Wear protective clothing.

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### Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystals or powder

Color: Colorless to pale yellow

Odor: Slightly characteristic odour

Melting point/Freezing point: 70°C

Boiling point or initial boiling point: (Dibutyl hydroxytoluene)265°C

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: (Dibutyl hydroxytoluene)(C.C.) 127°C

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: 0.00006 g/100 ml

Solubility in solvent data is not available.

n-Octanol/water partition coefficient: log Pow5.1

Vapor pressure: 1.3 Pa (20 °C)

Density and/or relative density: 1.03-1.05 g/cm<sup>3</sup>

Relative vapor density (Air=1): 7.6

Particle characteristics data is not available.

Other information

Other information is not available.

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### Section 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

Decomposes on burning. Decomposes on contact with oxidizing materials. (ICSC 0841)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.



Incompatible materials  
Oxidizing agents  
Hazardous decomposition products  
Carbon oxides

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**Section 11. Toxicological Information**

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Data for components of the product]

[GHS Cat. Japan, base data]

(Dibutyl hydroxytoluene)

rat LD50=2450mg/kg (DFGOT vol.23, 2007)

(Methanol)

human LD50=ca. 1400mg/kg (DFGOT vol.16, 2001)

(2,4,6-Tri-tert-butylphenol)

female rat LD50=1610mg/kg (USEPA/HPV, 2001)

Acute toxicity (Dermal)

[Data for components of the product]

[GHS Cat. Japan, base data]

(Dibutyl hydroxytoluene)

rat LD50 >2000mg/kg (SIDS, 2002)

(Methanol)

rabbit LD50=15800mg/kg (DFGOT vol.16, 2001)

Acute toxicity (Inhalation)

[Data for components of the product]

[GHS Cat. Japan, base data]

(Methanol)

vapor: rat LC50>31500ppm/4hr (DFGOT vol.16, 2001)

Irritant properties

Skin corrosion/irritation data is not available.

Serious eye damage/irritation

[Product]

Category 2, Causes serious eye irritation

[Data for components of the product]

[GHS Cat. Japan, base data]

(Dibutyl hydroxytoluene)

rabbit recover after 72hours (SIDS, 2002)

(Methanol)

rabbit category 2 : Draize test (EHC 196, 1997)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenicity

[Data for components of the product]

[IARC]

(Dibutyl hydroxytoluene)

Group 3 : Not classifiable as to its carcinogenicity to humans

[ACGIH]

(Dibutyl hydroxytoluene)



A4(2001) : Not Classifiable as a Human Carcinogen

Reproductive toxicity

[Product]

Category 2, Suspected of damaging fertility or the unborn child

[Data for components of the product]

[GHS Cat. Japan, base data]

(Dibutyl hydroxytoluene)

cat. 2; SIDS, 2002

(Methanol)

cat. 1B; mouse : PATTY 5th, 2001

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Category 1, Causes damage to organs

[Data for components of the product]

[cat.1]

[GHS Cat. Japan, base data]

(Dibutyl hydroxytoluene)

nervous system (MOE Environmental Risk Assessment for Chemical Substances vol.6, 2008)

[cat.3 (narcotic effects)]

[GHS Cat. Japan, base data]

(Methanol)

narcotic effect (PATTY 5th, 2001)

(2,4,6-Tri-tert-butylphenol)

narcotic effect (USEPA/HPV, 2001)

STOT-repeated exposure

[Product]

Category 2, May cause damage to organs through prolonged or repeated exposure

[Data for components of the product]

[cat.2]

[GHS Cat. Japan, base data]

(Dibutyl hydroxytoluene)

liver, lungs (SIDS, 2002; MOE Environmental Risk Assessment for Chemical Substances vol.6, 2008)

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

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## Section 12. Ecological Information

### Toxicity

#### Aquatic toxicity

[Product]

Category 1, Very toxic to aquatic life

Category 1, Very toxic to aquatic life with long lasting effects

[Data for components of the product]

Hazardous to the aquatic environment, short-term (acute)

[GHS Cat. Japan, base data]



(Dibutyl hydroxytoluene)  
Crustacea (Daphnia magna) EC50=0.84mg/L/48hr (MOE Japan, 1999)  
(Methanol)  
Crustacea (Brine shrimp) LC50=900.73mg/L/24hr (EHC196, 1998)  
(2,4,6-Tri-tert-butylphenol)  
Crustacea (Daphnia magna) EC50=0.11mg/L/48hr (MOE Japan, 2000)  
Hazardous to the aquatic environment, long-term (chronic)  
[GHS Cat. Japan, base data]  
(Dibutyl hydroxytoluene)  
Fish (Atheriniformes) ELS NOEC=0.053mg/L (MOE Japan, 2007)

Water solubility  
(Dibutyl hydroxytoluene)  
0.00006 g/100 ml (25°C) (ICSC, 1999)  
(Methanol)  
100 g/100 ml (PHYSPROP\_DB, 2009)

Persistence and degradability  
[Data for components of the product]  
(Dibutyl hydroxytoluene)  
Not rapidly degradable (BOD\_Degradation : 4.5% (METI existing chemical safety inspections 1979))  
(2,4,6-Tri-tert-butylphenol)  
Not rapidly degradable (BOD\_Degradation: 0% (METI existing chemical safety inspections, 1982))

Bioaccumulative potential  
[Data for components of the product]  
(Dibutyl hydroxytoluene)  
log Pow=5.1 (ICSC, 1999); BCF=2800 (Check & Review, Japan)  
(Methanol)  
log Pow=-0.82/-0.66 (ICSC, 2000)

Mobility in soil  
Mobility in soil data is not available.

Other adverse effects  
Ozone depleting chemical data is not available.

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### Section 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.

Dispose of contents/container as industrial waste. Accordance with local/national regulation.

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### Section 14. Transport Information

UN Number or ID Number : 3077

UN Proper Shipping Name :

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

Class or division (Transport hazard class) : 9

Packing group : III



ERG GUIDE No.: 171  
IMDG Code (International Maritime Dangerous Goods Regulations)  
UN Number or ID Number : 3077  
UN Proper Shipping Name :  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
Class or division (Transport hazard class) : 9  
Packing group : III  
IATA (Dangerous Goods Regulations)  
UN Number or ID Number : 3077  
UN Proper Shipping Name :  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
Class or division (Transport hazard class) : 9  
Hazard labels : Miscellaneous & Environmentally hazardous  
Packing group : III  
Environmental hazards  
Marine pollutants (yes/no) : yes

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**Section 15. Regulatory Information**

Safety, health and environmental regulations/legislation specific for the substance or mixture  
U.S. Toxic Substances Control Act (TSCA) Inventory  
Chemicals listed in TSCA Inventory  
Methanol; Dibutyl hydroxytoluene; 2,4,6-Tri-tert-butylphenol  
Other regulatory information  
Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

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**Section 16. Other information**

References and sources for data  
Globally Harmonized System of classification and labelling of chemicals, UN  
Recommendations on the TRANSPORT OF DANGEROUS GOODS 22nd edit., 2021 UN  
IMDG Code, 2022 Edition (Incorporating Amendment 41-22)  
IATA Dangerous Goods Regulations (65th Edition) 2024  
2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)  
2024 TLVs and BEIs. (ACGIH)  
JIS Z 7252 : 2019  
JIS Z 7253 : 2019  
2023 Recommendation on TLVs (JSOH)  
Supplier's data/information  
General Disclaimer  
Please provide SDS to customers for selling or transferring.  
All chemicals have unknown hazard. Handle the product with care.  
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 2022).