Date of issue: 2019/02/07
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Safety Data Sheet

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

Product identifier:

Product name: Dimethyl terephthalate

SDS No. : 2543E-2

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
e-mail address: kagakuhinanzenkanri@kishida.co.jp

Section 2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

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

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 2

Label elements

Signal word: Warning

HAZARD STATEMENT

May cause respiratory irritation

Toxic to aquatic life

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Response

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

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Storage

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

Disposal

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

Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Dimethyl terephthalate

Content (%):99(min)

Chemical formula:C6H4(COOCH3)2

Chemicals No, Japan:3-1328

CAS No.:120-61-6

MW:194.19

ECNO:204-411-8

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

Section 4. First-aid measures

Descriptions of first-aid measures

General measures

Call a POISON CENTER/doctor/physician 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 (or hair)

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.

Section 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 resistant or flame 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.

Section 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

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

Preventive measures for secondary accident

Collect spillage.

Section 7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Avoid breathing 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

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"

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

Section 8. Exposure controls/personal protection

Control parameters

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.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystals to nodule, or flakes
Color: White
Odor data is not available.
Melting point/Freezing point: 139-142℃
Boiling point or initial boiling point: (Dimethyl terephthalate)288℃
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: 0.8 vol %
Upper explosion limit: 11.8 vol %
Flash point: (Dimethyl terephthalate)(C.C.) 141℃
Auto-ignition temperature: (Dimethyl terephthalate)518℃
Decomposition temperature data is not available.
pH data is not available.
Kinematic viscosity data is not available.
Solubility:
Solubility in water: Very poor (13℃)
n-Octanol/water partition coefficient: log Pow2.35
Vapor pressure: 1.4 Pa (2.5℃)
Density and/or relative density: 1.2g/cm3
Relative vapor density (Air=1): 5.5
Particle characteristics data is not available.

Section 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.
Decomposes on burning. This produces irritating fumes. (ICSC 0262)
Conditions to avoid
Contact with fire source.
Incompatible materials
Not available.
Hazardous decomposition products
Carbon oxides

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)
[Data for components of the product]
[GHS Cat. Japan, base data]
(Dimethyl terephthalate)
rat LD50=3500-4700mg/kg (AICIS IMAP, 2020)
Acute toxicity (Dermal)

[Data for components of the product]
[GHS Cat. Japan, base data]
(Dimethyl terephthalate)
rabbit LD50=15400mg/kg (ACGIH, 2011)
Acute toxicity (Inhalation)
[Data for components of the product]
[GHS Cat. Japan, base data]
(Dimethyl terephthalate)
mist: rat LC50=55mg/L/2hr (cal.: 27.5mg/L/4hr) (MOE Result of the initial environmental risk assessment of chemicals, 2015)
Irritant properties
Skin corrosion/irritation data is not available.
Serious eye damage/irritation data is not available.
Allergenic and sensitizing effects data is not available.
Mutagenic effects data is not available.
Carcinogenic effects data is not available.
Reproductive toxicity data is not available.
Specific target organ toxicity (STOT)
STOT-single exposure
[Data for components of the product]
[cat.3 (resp. irrit.)]
[GHS Cat. Japan, base data]
(Dimethyl terephthalate)
respiratory tract irritation (NITE Initial Risk Assessment Report, 2007; SIAR, 2001)
STOT-repeated exposure data is not available.
Aspiration hazard data is not available.

Section 12. Ecological Information

Toxicity
Aquatic toxicity
[Data for components of the product]
Hazardous to the aquatic environment (Acute)
[GHS Cat. Japan, base data]
(Dimethyl terephthalate)
Fish (Pimephales promelas) LC50=9.6mg/L/96hr (MOE Japan, 2012)
Hazardous to the aquatic environment (Long-term)
[GHS Cat. Japan, base data]
(Dimethyl terephthalate)
Crustacea (Daphnia magna) NOEC=1.72mg/L/21days (MOE Japan, 2012)
Water solubility
(Dimethyl terephthalate)
very poor (13℃) (ICSC, 2005)
Persistence and degradability
[Data for components of the product]
(Dimethyl terephthalate)
Rapidly degradable (BOD_Degradation : 84%/14 days; HPLC_Degradation: 100%/14 days (MITI official bulletin))
Bioaccumulative potential
[Data for components of the product]
(Dimethyl terephthalate)
log Pow=2.25 (PHYSPROP DB, 2005), 2.35 (ICSC, 2005)
Mobility in soil
Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

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 in accordance with local/national regulation.

Section 14. Transport Information

UN No. or ID No.: Not applicable

Not applicable to IMDG Code

Not applicable to IATA Dangerous Goods Regulations

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

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

Dimethyl terephthalate

Other regulatory information

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

Section 16. Other information

GHS classification and labelling

STOT – single exposure, Category 3, Respiratory tract irritation: H335 May cause respiratory irritation.

Hazardous to the aquatic environment, short-term (acute), Category 2: H401 Toxic to aquatic life

References and sources for data

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)
2022 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 2021).