Issue date: 9/16/2003
Revision date: 5/21/2024

Safety Data Sheet

1. Chemical product and company identification

Product name : Terephthalic acid

Company information

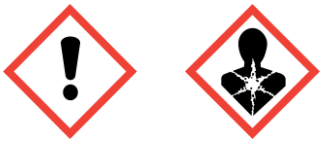
Name of manufacturer	:	KANTO CHEMICAL CO., INC.
Address	:	2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, JP
Name of section	:	Business Administration Department, Reagent Division
Telephone number	:	+81-3-6214-1090
Facsimile number	:	+81-3-3241-1047
Mail address	:	BC32@kanto.co.jp
Reference No	:	40015
Recommended use	:	For research use only
Restrictions on use	:	Seek expert judgment when using the product for applications other than those recommended.

2. Hazards identification

GHS classification

Health hazards	Serious eye damage/eye irritation	Category 2B
	Specific target organ toxicity (single exposure)	Category 3 (respiratory tract irritation.)
	Specific target organ toxicity (repeated exposure)	Category 1 (respiratory organs)

Hazard pictograms



Signal word : Danger

Hazard statements : Causes eye irritation
May cause respiratory irritation
Causes damage to organs (respiratory organs) through prolonged or repeated exposure

Precautionary statements

Prevention : Do not breathe dust.
Wash hands, forearms and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.

Response : IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER or doctor if you feel unwell.
Get medical advice/attention if you feel unwell.
If eye irritation persists: Get medical advice/attention.

Storage	:	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	:	Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

3. Composition/information on ingredients

Distinction of substance or mixture	:	Substance
Synonyms	:	p-Benzenedicarboxylic acid, p-Phthalic acid

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Terephthalic acid	≥ 98	C8H6O4	Listed	202-830-0	100-21-0

4. First aid measures

First aid measures

First-aid measures after inhalation	:	Remove the victim to fresh air, and make him blow his nose and gargle.
First-aid measures after skin contact	:	Wash the affected areas under running water.
First-aid measures after eye contact	:	Wash the affected areas under running water for at least 15 minutes. If necessary, get medical treatment.
First-aid measures after ingestion	:	Rinse mouth with water. Give the victim one or two glasses of water or milk. Do not induce vomiting. Get medical treatment as soon as possible.
Personal Protection in First Aid and Measures	:	Rescuers should wear proper protective equipment like rubber gloves, goggles.

Most Important Symptoms/Effects

Symptoms/effects	:	Inhalation irritates the mucous membranes and upper respiratory tract.

5. Fire fighting measures

Suitable extinguishing media	:	Dry chemical, CO2, dry sand, or alcohol-resistant foam
Unsuitable extinguishing media	:	Water spray, Foam extinguisher
Fire hazard	:	May form combustible dust concentrations in air.
Firefighting instructions	:	Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area. Fight fire from windward. Dry chemical powder, carbon dioxide or dry sand should be used for small fires. Alcohol-resistant foam extinguisher is effective for a large scale fire.
Personal protection (Emergency response)	:	Wear breathing apparatus.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

General measures	:	Wear proper protective equipment and avoid contact with skin and inhalation of dust. Conduct operations from upwind and evacuate people downwind.

Environmental precautions

Environmental precautions	:	Attention should be given to avoid damage to the environment by flowing of spillage to rivers.

Methods and Equipment for Containment and Cleaning up

For containment	:	Sweep up in a chemical waste container. Flush contaminated area with copious amounts of water.
Prevention Measures for Secondary Accidents	:	Remove nearby sources of ignition and prepare extinguishing media.

7. Handling and storage

Handling

Technical measures	:	Wear appropriate protective equipment to avoid contact with skin or inhalation of dust. Fire is prohibited.
Precautions for safe handling	:	Avoid formation of dust and aerosols.

Storage

Storage conditions	:	Store in a dark, cool place and tightly closed.
Material used in packaging/containers	:	Glass, polyethylene, polypropylene.

8. Exposure controls / Personal protection equipment

ACGIH TWA	10 mg/m³

Appropriate engineering controls	:	Install a local ventilation system in case of dusty condition.

Protective equipment

Respiratory protection	:	If necessary, wear dust mask
Hand protection	:	Impervious protective gloves
Eye protection	:	Safety goggles
Skin and body protection	:	Protective clothing, protective boots

9. Physical and chemical properties

Physical state	:	Solid
Color	:	White
Odor	:	Odorless
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	260 ° C (O.C.)
Auto-ignition temperature	:	496 ° C
Decomposition temperature	:	No data available
Flammability	:	Flammable

Vapor pressure	:	No data available
Relative density	:	1.51 (20/4℃)
Density	:	No data available
Relative gas density	:	5.73
Solubility	:	Water: Insoluble. Organic solvents: Soluble in pyridine.
Partition coefficient n-octanol/water (log Pow)	:	2
Explosive limits (vol %)	:	No data available
Viscosity, kinematic	:	No data available
Sublimation point	:	402 ° C
Particle characteristics	:	No data available

10. Stability and reactivity

Reactivity	:	It is easily esterified with fatty alcohols in the presence of concentrated sulfuric acid. Make various metal salts.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	May react violently when in contact with oxidizing substance.
Conditions to avoid	:	Light, heat.
Incompatible materials	:	Oxidizing substances.
Hazardous decomposition products	:	Carbon monoxide.

11. Toxicological information

Acute toxicity (oral)	:	No classification rat LD50>5000mg/kg
Acute toxicity (dermal)	:	No classification rabbit LD50>2000mg/kg
Acute toxicity (inhalation)	:	No classification (gas) No classification (vapor) Classification not possible (dust, mist)
Skin corrosion/irritation	:	No classification There are multiple reports of skin primary irritation tests (administration time unknown) with rabbits and these resulted in "no irritation" or "slight irritation". In addition, also in rats, there is a report that no irritation was observed after application of 0.2 mL of this substance. Based on these results, it was classified as "No classification" since it is considered to be slightly irritating.
Serious eye damage/irritation	:	Causes eye irritation Since there are reports of "no irritation" or "slight irritation" in eye irritation tests with rabbits, it was considered to be slightly irritating, and it was classified into category 2B.
Respiratory sensitization	:	Classification not possible
Skin sensitization	:	Classification not possible Besides, there is a report that no sensitization was observed in a skin sensitization test with guinea pigs. However, since the test conditions, details of the results, etc. were unknown, it was judged to be insufficient data for classification.

Germ cell mutagenicity	:	No classification As for in vivo, it was negative in a micronucleus test with mouse bone marrow cells. As for in vitro, it was all negative in bacterial reverse mutation tests, a micronucleus test and a chromosomal aberration test with human peripheral blood lymphocytes, and a chromosomal aberration test with cultured mammalian cells.
Carcinogenicity	:	Classification not possible There are no carcinogenicity classification results by international organizations. In a 2-year toxicity study in which this substance (1000 mg/kg/day) was dosed by feeding to rats, urinary bladder calculi, hyperplasia of the urinary bladder, and tumors of the urinary bladder were reported. However, it was classified as "Classification not possible" since carcinogenicity in humans cannot be evaluated.
Reproductive toxicity	:	Classification not possible In a one-generation reproductive toxicity test with rats by the oral route, deaths of offspring, decreased survival rates and decreased body weight gain of neonates, and calculi of the kidney and urinary bladder in pups were observed at doses (930-1219 mg/kg/day) where toxicity of the parental animals. Besides, no teratogenicity was observed in a teratogenicity test with rats by the inhalation route. Doses where parental animal toxicity and pup toxicity were observed were extremely high doses. Therefore, it was classified as "Classification not possible".
STOT-single exposure	:	May cause respiratory irritation There is a report that this substance was slightly irritating to the respiratory organs. There are no other toxicity data on single exposure. From the above, it was classified into category 3 (respiratory tract irritation).
STOT-repeated exposure	:	Causes damage to organs (respiratory organs) through prolonged or repeated exposure There are no hazard findings by repeated exposure in humans. As for experimental animals, in studies where rats were exposed by inhalation to this substance for 28 days or 6 months, effects on the respiratory organs were observed at or less than concentrations corresponding to category 1. In the oral route, in studies where rats were dosed by feeding for 2 weeks, 15 weeks, or 2 years, calculi in the urinary bladder and hyperplasia of the transitional epithelium were observed at doses exceeding category 2. From the above, it was classified into category 1 (respiratory organs).
Aspiration hazard	:	Classification not possible

12. Ecological information

Ecotoxicity

Aquatic acute	:	No classification Oryzias Latipest LC50>10mg/L/96h
Aquatic chronic	:	No classification

Persistence and degradability

Readily biodegradable
BOD : 74.7%

Bioaccumulative potential

Low bioconcentration
BCF : 3

Mobility in soil

High mobility
Koc : 79

Hazardous to the ozone layer

Ozone : Classification not possible

13. Disposal considerations

Ecological waste information : Mixed with flammable organic solvents and burn in a chemical incinerator equipped with an afterburner and a scrubber. Or entrust approved waste disposal companies with the disposal.

Contaminated container and packaging : In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

International Regulations

Transport by sea(IMDG)

UN-No. (IMDG) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Packing group (IMDG) : Not applicable
Transport hazard class(es) (IMDG) : Not applicable

Air transport(IATA)

UN-No. (IATA) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Packing group (IATA) : Not applicable
Transport hazard class(es) (IATA) : Not applicable

Marine pollutant : Not applicable

15. Regulatory information

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility.

16. Other information

Data sources : Encyclopaedia Chimica, Kyoritsu Shuppan Co, Ltd. (1963) . NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully.The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements.The information herein is only provision of information, and it does not represent a guarantee the properties of the product.The Safety Data Sheet(SDS) is prepared based on JIS Z7253.