

SAFETY DATA SHEET

TETRABROMOETHANE

Revision Date 17/03/2019



1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name

Tetrabromoethane

Details of the supplier of the safety data sheet

Palica Chemistry Co., Limited

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2 - HAZARDS IDENTIFICATION

Emergency Overview

GHS Classification according to Regulation (EC) No 1272/2008

Acute Oral Toxicity (Category 4)

Acute Inhalation Toxicity (Category 2)

Skin Sensitization (Category 2)

Eye Irritation (Category 2)

Long-term (chronic) aquatic hazard (Category 3)

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statements

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H330 - Fatal if inhaled.

H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

P260 - Do not breathe mist, vapor or fumes.

P264 - Wash hands and other skin areas exposed to material thoroughly after handling.

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

P271 - Use only outdoors or in a well-ventilated area.

P273 - Avoid release to the environment.

P280 + P284 - Wear protective gloves / protective clothing / eye protection / face protection and respiratory protection.

Response

P304 + P340 + P310—IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor.

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

P320 - Specific treatment is urgent: Seek immediate medical attention. Refer to Section 4 for this document.

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

Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up.

Disposal

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Dispose of contents and container to an approved waste disposal plant.

3 - COMPOSITION / INFORMATION ON INGREDIENTS

Synonyms: 1,1,2,2-Tetrabromoethane

Molecular Formula: C₂H₂Br₄

Molecular Weight: 345.65 g/mol

CAS#: 79-27-6

EC-No.: 201-191-5

Concentration: 100%

4 - FIRST AID MESURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

Move out of dangerous area. Remove contaminated clothing.

If inhaled

IF INHALED: If product mist or vapor causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. Loosen tight fitting clothing such as a collar, tie, belt or waistband. Seek immediate medical attention.

In case of skin contact

Flush skin with large amounts of water while removing contaminated clothing and continue rinsing for at least 15 minutes. Wash contaminated clothing and shoes thoroughly before reuse. If irritation persists, seek medical attention.

In case of eye contact

IF IN EYES: Immediately flush eyes with large amounts of water for 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses, if present and easy to do, after the first 2 minutes and continue rinsing. Seek immediate medical attention, preferably from an ophthalmologist.

If swallowed

IF SWALLOWED: Rinse mouth with water if victim is conscious. Remove dentures, if present. Do not induce vomiting unless directed to do so by medical personnel. Give 1 - 2 cupfuls of water to drink if victim is conscious, alert and able to swallow. Never give anything by mouth to an unconscious or convulsing person. Immediately call a POISON CENTER or doctor.

Most important symptoms and effects, both acute and delayed**Potential health symptoms and effects****Eyes:**

Causes severe eye irritation with redness, swelling, pain and tearing. Direct eye contact may cause corneal injury.

Skin:

Causes skin irritation with redness, itching, discomfort and possible blisters. May be harmful if absorbed through the skin.

Inhalation:

Inhalation of mist or vapor causes irritation of the respiratory tract. Symptoms may include irritation of the nose and throat, cough and shortness of breath. Brief exposure effects may last only a few minutes. Causes headache, nausea, loss of appetite and central nervous system depression, resulting in possible respiratory depression. Kidney and severe liver damage have occurred from inhalation of this substance with symptoms such as dark urine and yellow jaundice. Breathing high vapor concentrations, especially in an enclosed area, may cause pulmonary edema and damage to the lungs. Can be fatal if inhaled. Inhalation of toxic quantities can cause narcosis, coma and respiratory paralysis.

Ingestion:

Causes irritation of the gastrointestinal tract with headache, loss of appetite, nausea, vomiting, abdominal pain and diarrhea. Causes central nervous system depression. May have a narcotic effect. Causes damage to the liver and kidneys.

Chronic:

Chronic exposure to this substance can cause damage to the liver, kidneys and lungs. Can causes general deterioration of health by an accumulation in one or many human organs.

Indication of any immediate medical attention and special treatment needed

No data available.

5 - FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

Water jets and high pressure streams may spread the fire.

Special hazards during fire fighting

Carbon oxides, hydrogen bromide gas.

Special hazards arising from the substance or mixture

No data available.

Hazardous thermal decomposition products

No data available.

Special protective actions for fire-fighters

No data available.

Advice for fire-fighters

Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If possible, water contaminated by this material should be contained from being discharged to any waterway, sewer or drain to prevent environmental contamination.

Further information

No data available.

6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Do not breathe spray. Avoid contact with eyes, skin and respiratory system. Evacuate non-essential personnel. Wear all appropriate protective equipment designated in Section 8. DO NOT breathe vapors or aerosols. Ventilate the area. Do not get material on skin or clothing.

For emergency responders:

Evacuate personnel to safe areas. Keep people away from and upwind of spill / leak. Ventilate the area. Wear suitable protective clothing.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Cover drains and contain spill. Cover spill with a large quantity of inert absorbent. Do not use combustible material such as sawdust. Shovel or sweep up material and place into an approved container for proper disposal. Do not allow material or runoff from rinsing contaminated areas to enter floor drains or storm drains and ditches which lead to waterways. Dispose of according to state and federal regulations.

7 - HANDLING AND STORAGE

Personal precautions

Safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Do not get in eyes or on skin or clothing. DO NOT breathe vapors or aerosols. If normal use of this material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. Wash contaminated clothing and shoes before reuse.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities

Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10), food and drink. Transfer only to approved containers having correct labeling. Keep containers tightly closed. Protect container against physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Containers of this material may be hazardous when empty as they may retain product residues. Use appropriate containment to avoid environmental contamination. Ventilate closed areas. Do not take internally. Keep out of reach of children.

Other advice

No further information available.

8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

CAS Number	Ingredient	OSHA PEL	ACGIH TLV	NIOSH
79-27-6	Tetrabromoethane	1ppm, 14mg/m3 TWA	0.1ppm TWA	

Personal protective equipment

Appropriate engineering controls

Use appropriate engineering controls to minimize exposure to vapors/dust generated via routine use.

Maintain adequate ventilation of workplace and storage areas.

Individual protection measures: Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Facilities storing or using this material should be equipped with emergency eyewash, and a safety shower. Good personal hygiene practices should always be followed. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking or using the lavatory.

Eye/face protection

Wear protective goggles or safety glasses with non-perforated side shields and a face shield. Refer to 29 CFR 1910.133, ANSI Z87.4 or Standard EN 166.

Hand protection

Wear gloves recommended by glove supplier for protection against materials in Section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of gloves must be greater than the intended use period. Other protective equipment: Protective clothing. Protective boots, if the situation requires.

Skin and Body protection

Body suite, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.

Impervious boots of chemically resistant material should be worn at all times. No special footwear is required other than what is mandated at place of work.

Respiratory protection

Always use an approved respirator when vapor/aerosols are generated. Where risk assessment shows air-purifying respirators are appropriate use a full-faced respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form: clear liquid
Color: colorless to pale yellow
Odor: no data available
Odor threshold: no data available

Safety data

pH: no data available
Melting point/Freezing point: 0-2°C
Boiling point: 119°C
Flash point: no data available
Specific Gravity: 2.96
Viscosity: Kinematic no data available
Ignition temperature: no data available
Lower explosion limit: no data available
Upper explosion limit: no data available
Partition coefficient(n-octanol/water): no data available
Water solubility: no data available
VOC (w/w): no data available

10 - STABILITY AND REACTIVITY

Stability

The product is stable under recommended storage and handling conditions.

Hazardous polymerization

Polymerization will not occur.

Hazardous reactions

Possible risk of explosive reaction with alkali and alkaline earth metals, sodium amide and powdered metals.

Hazardous decomposition products

Hazardous thermal decomposition products include hydrogen bromide, bromine and carbonyl bromide.

Conditions to avoid

Temperature extremes, contact with incompatible materials, direct sunlight.
Avoid contact with most plastics and rubbers.

Incompatible materials

Iron, rubber, various plastics, powdered metals, active metals, zinc.

11 - TOXICOLOGICAL INFORMATION

Primary routes of exposure

No data available.

Acute toxicity

Oral: LD50 Oral - rat - 1200 mg/kg
Inhalation: LC50 Inhalation - 549 mg/l, 4h

Skin corrosion / irritation

Causes skin irritation.

Serious eye damage / eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available.

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available.

Aspiration hazard

No data available.

Subacute to chronic toxicity

No data available.

Additional Information

No data available.

12 - ECOLOGICAL INFORMATION**Toxicity**

Harmful to aquatic life with long lasting effects

Acute and prolonged toxicity to fish: LC100 - Carassius auratus (Goldfish): 20 mg/l

Persistence and degradability

No data available.

Biodegradability

No data available.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

PBT and vPvB conclusion

No data available.

Other adverse effects

No data available.

13 - DISPOSAL CONSIDERATIONS

Product

Dispose of at a supervised incineration facility or an appropriate waste disposal facility according to current applicable local laws and regulations.

Contaminated packaging

Contaminated container should be labeled and disposed in accordance to local laws and regulations.

14 - TRANSPORT INFORMATION

IMDG

UN Number: 2504

Class(es): 6.1

UN Proper Shipping Name: Tetrabromoethane

Packing Group: III

Marine Pollutant: Yes

EMS Code: F-A, S-A

IATA

UN Number: 2504

Class(es): 6.1

UN Proper Shipping Name: Tetrabromoethane

Packing Group: III

15 - REGULATORY INFORMATION

Safety, health and environmental regulations

No data available.

Safety assessment

No chemical safety assessment.

16 - OTHER INFORMATION

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Disclaimer

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