

# Tetrabromoethane

## Company Information

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## Product Identification

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### **【Product Name】**

1,1,2,2-Tetrabromoethane

### **【Synonyms】**

1,1,2,2-Tetrabromoethane

Muthmans liquid

sym-Tetrabromoethane

### **【CAS】**

79-27-6

### **【Formula】**

C<sub>2</sub>H<sub>2</sub>Br<sub>4</sub>

### **【Molecular Weight】**

345.7

### **【EINECS】**

201-191-5

### **【RTECS】**

K18225000

### **【RTECS Class】**

Tumorigen; Mutagen; Primary Irritant

### **【Merck】**

12,9328

**【Beilstein/Gmelin】**

1098321

**【Beilstein Reference】**

4-01-00-00162

**【EC Index Number】**

602-016-00-9

**【EC Class】**

Very toxic; Irritant; Dangerous for the Environment

## Physical and Chemical Properties

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**【Appearance】**

Pale-yellow liquid with a pungent odor similar to camphor or iodoform. A solid below 0 deg c.

**【Solubility in water】**

650 mg/L

**【Melting Point】**

-1

**【Boiling Point】**

244

**【Vapor Pressure】**

0.05 (25 C)

**【Density】**

2.9656 g/cm<sup>3</sup> (20 C)

**【Partition Coefficient】**

3.67

### **【Heat Of Vaporization】**

46.1 kJ/mol

### **【Usage】**

Separating minerals by specific gravity, solvent for fats, oils, and waxes, solvent in microscopy.

### **【Saturation Concentration】**

26 ppm at 20 C (calculated)

### **【Vapor Density】**

11.9

### **【Refractive Index】**

1.63263 (20 C)

## **First Aid Measures**

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### **【Ingestion】**

Induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

### **【Inhalation】**

Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

### **【Skin】**

Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

### **【Eyes】**

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

## **Handling and Storage**

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### **【Storage】**

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from

incompatible substances. Keep away from metals.

### **【Handling】**

Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

## **Hazards Identification**

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### **【Ingestion】**

Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage.

### **【Inhalation】**

Causes respiratory tract irritation. May cause liver and kidney damage. May cause lung damage. May cause headache, loss of appetite, nausea, fatigue, abdominal pain, darkened urine and jaundice..

### **【Skin】**

May be absorbed through damaged or abraded skin in harmful amounts. Exposure may cause irritation and possible burns. Causes symptoms similar to those of inhalation.

### **【Eyes】**

Contact with eyes may cause severe irritation, and possible eye burns.

### **【Hazards】**

Containers may explode when heated.

### **【EC Risk Phrase】**

R 26 36 52/53

### **【EC Safety Phrase】**

S 24 27 45 61

### **【UN (DOT)】**

2504

## **Exposure Controls/Personal Protection**

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### **【Personal Protection】**

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Skin: Wear appropriate gloves to prevent skin exposure. Clothing: Wear appropriate protective clothing to minimize contact with skin.

### **【Respirators】**

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

### **【Exposure limit(s)】**

OSHA PEL: TWA 1 ppm (14 mg/m<sup>3</sup>) NIOSH REL: See Appendix D NIOSH IDLH: 8 ppm

### **【Poison Class】**

2

## **Fire Fighting Measures**

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### **【Flash Point】**

97

### **【Autoignition】**

335

### **【Fire Fighting】**

Wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Runoff from fire control or dilution water may cause pollution. Extinguishing media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

### **【Upper exp. limit】**

24.5

### **【Fire Potential】**

May burn but does not ignite readily.

## Accidental Release Measures

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### **【Small spills/leaks】**

Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, using the appropriate protective equipment. Provide ventilation.

## Stability and Reactivity

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### **【Stability】**

Stable under normal shipping and handling conditions.

### **【Incompatibilities】**

Strong oxidizers, strong bases, and metals such as aluminum, magnesium, and zinc in the presence of steam. Will attack some forms of plastics, rubber, and coatings.

### **【Decomposition】**

Irritating and toxic fumes and gases, hydrogen bromide, bromine fumes, carbonyl bromide.

### **【Combustion Products】**

When heated, it emits highly toxic fumes of carbonyl bromide.

## Transport Information

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### **【UN Number】**

2504

### **【Hazard Class】**

6.1

### **【Packing Group】**

III

### **【HS Code】**

2903 30 36

