# **Material Safety Data Sheet**

Version 3.3 Revision Date 01/05/2013 Print Date 08/28/2013

#### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name Pentaerythritol tetrabromide

**Product Number** 76650 Brand Fluka

Supplier Sigma-Aldrich

> 3050 Spruce Street SAINT LOUIS MO 63103

USA

+1 800-325-5832 Telephone Fax +1 800-325-5052 Emergency Phone # (For (314) 776-6555

both supplier and manufacturer)

**Preparation Information** Sigma-Aldrich Corporation

Product Safety - Americas Region

1-800-521-8956

#### 2. HAZARDS IDENTIFICATION

### **Emergency Overview**

### **OSHA Hazards**

No known OSHA hazards

Not a dangerous substance according to GHS.

#### **HMIS Classification**

Health hazard: 0 Flammability: 0 Physical hazards: 0

**NFPA** Rating

Health hazard: 0 Fire: 0 Reactivity Hazard: 0

# **Potential Health Effects**

Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Skin May be harmful if absorbed through skin. May cause skin irritation.

May cause eye irritation. **Eyes** Ingestion May be harmful if swallowed.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms Tetrakis(bromomethyl)methane

Formula C<sub>5</sub>H<sub>8</sub>Br<sub>4</sub> Molecular Weight 387.73 g/mol

No ingredients are hazardous according to OHSA criteria.

### 4. FIRST AID MEASURES

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# If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

#### In case of skin contact

Wash off with soap and plenty of water.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

### 5. FIREFIGHTING MEASURES

### Suitable extinguishing media

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

### Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### **Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen bromide gas

### **6. ACCIDENTAL RELEASE MEASURES**

#### Personal precautions

Avoid dust formation. Avoid breathing vapors, mist or gas.

### **Environmental precautions**

Do not let product enter drains.

## Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

# 7. HANDLING AND STORAGE

# Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Store under inert gas. Moisture sensitive.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

### Personal protective equipment

# **Respiratory protection**

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### **Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin and body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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### Hygiene measures

General industrial hygiene practice.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

## **Appearance**

Form crystalline Colour white

Safety data

pH no data available

Melting point/range: 158 - 160 °C (316 - 320 °F)

point/freezing point

Boiling point 305 - 306 °C (581 - 583 °F) - lit.

Flash point no data available Ignition temperature no data available Auto-ignition no data available

temperature

Lower explosion limit no data available
Upper explosion limit no data available
Vapour pressure no data available

Density 2.596 g/cm3 at 25 °C (77 °F)

Water solubility no data available
Partition coefficient: no data available

n-octanol/water

Relative vapor

density

no data available

Odour no data available
Odour Threshold no data available
Evaporation rate no data available

#### 10. STABILITY AND REACTIVITY

#### **Chemical stability**

Stable under recommended storage conditions.

# Possibility of hazardous reactions

no data available

#### Conditions to avoid

no data available

#### Materials to avoid

Strong oxidizing agents

## **Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen bromide gas Other decomposition products - no data available

### 11. TOXICOLOGICAL INFORMATION

### **Acute toxicity**

#### Oral LD50

no data available

#### Inhalation LC50

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no data available

#### **Dermal LD50**

no data available

#### Other information on acute toxicity

no data available

#### Skin corrosion/irritation

no data available

### Serious eye damage/eye irritation

no data available

#### Respiratory or skin sensitization

no data available

#### Germ cell mutagenicity

no data available

### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as

probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a

carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a

known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a

carcinogen or potential carcinogen by OSHA.

### Reproductive toxicity

no data available

### **Teratogenicity**

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

### Potential health effects

**Inhalation** May be harmful if inhaled. May cause respiratory tract irritation.

**Ingestion** May be harmful if swallowed.

**Skin** May be harmful if absorbed through skin. May cause skin irritation.

**Eyes** May cause eye irritation.

#### Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

# Synergistic effects

no data available

### **Additional Information**

RTECS: Not available

### 12. ECOLOGICAL INFORMATION

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### **Toxicity**

no data available

# Persistence and degradability

no data available

#### Bioaccumulative potential

no data available

### Mobility in soil

no data available

#### PBT and vPvB assessment

no data available

#### Other adverse effects

no data available

#### 13. DISPOSAL CONSIDERATIONS

#### **Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

### 14. TRANSPORT INFORMATION

# DOT (US)

Not dangerous goods

#### **IMDG**

Not dangerous goods

#### IATA

Not dangerous goods

#### 15. REGULATORY INFORMATION

### **OSHA Hazards**

No known OSHA hazards

#### **SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### **SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

No SARA Hazards

#### **Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

# Pennsylvania Right To Know Components

CAS-No. Revision Date 1,3-Dibromo-2,2-bis(bromomethyl)propane 3229-00-3

### **New Jersey Right To Know Components**

1,3-Dibromo-2,2-bis(bromomethyl)propane CAS-No. Revision Date 3229-00-3

### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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#### **16. OTHER INFORMATION**

### **Further information**

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