

# Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 11/10/2008

Reviewed on 11/10/2008

## 1 Identification of substance:

### Product details:

**Product name:** Tetraethyl methylenediphosphonate

### Stock number:

A14532

L03267

### Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company

Johnson Matthey Catalog Company, Inc.

30 Bond Street

Ward Hill, MA 01835-8099

Emergency Phone: (978) 521-6300

CHEMTREC: (800) 424-9300

Web Site: [www.alfa.com](http://www.alfa.com)

**Information Department:** Health, Safety and Environmental Department

### Emergency information:

During normal hours the Health, Safety and Environmental Department.

After normal hours call Chemtrec at (800) 424-9300.

## 2 Composition/Data on components:

### Chemical characterization:

#### Description: (CAS#)

Tetraethyl methylenediphosphonate (CAS# 1660-94-2): 100%

#### Identification number(s):

EINECS Number: 216-764-5

## 3 Hazards identification

### Hazard description:



Xi Irritant

### Information pertaining to particular dangers for man and environment

R 36/37/38 Irritating to eyes, respiratory system and skin.

### Classification system

#### HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	1
FIRE	1
REACTIVITY	1

Health (acute effects) = 1

Flammability = 1

Reactivity = 1

## 4 First aid measures

### After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

### After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

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**After eye contact**

Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing** Seek medical treatment.

## 5 Fire fighting measures

**Suitable extinguishing agents**

Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards caused by the material, its products of combustion or resulting gases:**

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Phosphorus oxides

**Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

## 6 Accidental release measures

**Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

**Measures for environmental protection:**

Do not allow material to be released to the environment without proper governmental permits.

**Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**Additional information:**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

**Handling****Information for safe handling:**

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

No special precautions are necessary if used correctly.

**Information about protection against explosions and fires:**

Keep ignition sources away.

**Storage****Requirements to be met by storerooms and receptacles:**

No special requirements.

**Information about storage in one common storage facility:**

Store away from oxidizing agents.

**Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

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## 8 Exposure controls and personal protection

### Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

### Components with limit values that require monitoring at the workplace:

Not required.

**Additional information:** No data

### Personal protective equipment

#### General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

#### Breathing equipment:

Use suitable respirator when high concentrations are present.

**Protection of hands:** Impervious gloves

**Eye protection:** Safety glasses

**Body protection:** Protective work clothing.

## 9 Physical and chemical properties:

### General Information

<b>Form:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Not determined

### Change in condition

<b>Melting point/Melting range:</b>	Not determined
<b>Boiling point/Boiling range:</b>	149-151°C (300-304°F) (1mm Hg)
<b>Sublimation temperature / start:</b>	Not determined

**Flash point:** > 110°C (> 230°F)

**Ignition temperature:** Not determined

**Decomposition temperature:** Not determined

**Danger of explosion:** Product does not present an explosion hazard.

### Explosion limits:

<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined

**Vapor pressure:** Not determined

**Density at 20°C (68°F):** 1.16 g/cm<sup>3</sup>

## 10 Stability and reactivity

### Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

**Materials to be avoided:** Oxidizing agents

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**Dangerous reactions** No dangerous reactions known

**Dangerous products of decomposition:**

Carbon monoxide and carbon dioxide

Phosphorus oxides (e.g. P2O5)

## 11 Toxicological information

**Acute toxicity:**

**Primary irritant effect:**

**on the skin:** Irritant to skin and mucous membranes.

**on the eye:** Irritating effect.

**Sensitization:** No sensitizing effects known.

**Subacute to chronic toxicity:**

Organic phosphorus compounds exhibit a wide range of toxicity. Most are skin and eye irritants with the more volatile also being respiratory irritants. Those exhibiting substantial water reactivity will have stronger irritating properties and may be corrosive enough to cause severe burns. Some organic phosphorus compounds are cholinesterase inhibitors. Symptoms associated with these include muscle twitching, convulsions, flaccid paralysis, coma, respiratory failure. They can be highly paralytic.

Other than potential irritation (see above), no information on illness or injury to humans from acute or chronic exposure to this product is available.

**Additional toxicological information:**

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

## 12 Ecological information:

**General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

## 13 Disposal considerations

**Product:**

**Recommendation**

Consult state, local or national regulations to ensure proper disposal.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

Not a hazardous material for transportation.

**DOT regulations:**

**Hazard class:** None

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**Land transport ADR/RID (cross-border)**

**ADR/RID class:** None

**Maritime transport IMDG:**

**IMDG Class:** None

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** None

**Transport/Additional information:**

Not dangerous according to the above specifications.

## 15 Regulations

**Product related hazard informations:**

Observe the general safety regulations when handling chemicals

**Hazard symbols:**

Xi Irritant

**Risk phrases:**

36/37/38 Irritating to eyes, respiratory system and skin.

**Safety phrases:**

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

37 Wear suitable gloves.

**National regulations**

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

**Information about limitation of use:**

For use only by technically qualified individuals.

## 16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing MSDS:** Health, Safety and Environmental Department.

**Contact:** Paul V. Connolly