

9/10/07

SIGMA-ALDRICH

**Material Safety Data Sheet**

Version 3.0  
Revision Date 06/26/2007  
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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : **Diethyl pyrocarbonate**  
Product Number : D5758  
Brand : Sigma  
Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA  
Telephone : +1 800-325-5832  
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**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms : DEP  
DEPC  
Diethyl dicarbonate  
Diethyl oxydiformate  
Ethoxyformic acid anhydride  
Formula : C6H10O5  
Molecular Weight : 162.14 g/mol

CAS-No.	EC-No.	Index-No.	Concentration [%]
Diethyl pyrocarbonate			
1609-47-8	216-542-8	-	-

**3. HAZARDS IDENTIFICATION**

**Emergency Overview**  
**OSHA Hazards**  
Combustible Liquid  
Irritant  
  
**HMIS Classification**  
**Health Hazard:** 2  
**Flammability:** 2  
**Physical hazards:** 0  
  
**NFPA Rating**  
**Health Hazard:** 2  
**Fire** 2  
**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.  
**Eyes** May cause eye irritation.  
**Ingestion** May be harmful if swallowed.

**4. FIRST AID MEASURES**

**General advice**  
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.  
**If inhaled**  
If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.  
**In case of skin contact**  
Wash off with soap and plenty of water. Consult a physician.  
**In case of eye contact**  
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.  
**If swallowed**  
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**5. FIRE-FIGHTING MEASURES**

**Flammable properties**  
Flash point 69 °C (156 °F) - closed cup  
Ignition temperature no data available  
**Suitable extinguishing media**  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
**Special protective equipment for fire-fighters**  
Wear self contained breathing apparatus for fire fighting if necessary.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**  
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.  
**Environmental precautions**  
Do not let product enter drains.  
**Methods for cleaning up**  
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

**7. HANDLING AND STORAGE**

**Handling**  
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.  
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.  
**Storage**  
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Handle under argon. Store under argon.  
  
Handle and open container with care. Moisture sensitive.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face 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).

#### Hand protection

Handle with gloves.

#### Eye protection

Safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form liquid, clear  
Colour colourless

### Safety data

pH no data available  
Melting point no data available  
Boiling point 160 - 163 °C (320 - 325 °F)  
93 - 94 °C (199 - 201 °F) at 24 hPa (18 mmHg)  
Flash point 69 °C (156 °F) - closed cup  
Ignition temperature no data available  
Lower explosion limit no data available  
Upper explosion limit no data available  
Density 1.120 g/cm<sup>3</sup>  
Water solubility no data available

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions. Water in the container will lead to increased pressure and risk of explosion.

### Materials to avoid

Strong oxidizing agents, Strong acids, Strong bases, Strong reducing agents, Ammonia

### Hazardous decomposition products

#### Hazardous decomposition products formed under fire conditions.

Carbon oxides

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - rat - 850 mg/kg

### Irritation and corrosion

no data available

### Sensitisation

no data available

### Chronic exposure

no data available

### Signs and Symptoms of Exposure

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

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

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

no data available

### Further information on ecology

no data available

## 13. DISPOSAL CONSIDERATIONS

### Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### DOT (US)

UN-Number: 1993 Class: CBL Packing group: III  
Proper shipping name: Combustible liquid, n.o.s. (Diethyl pyrocarbonate)

### IMDG

Not dangerous goods

### IATA

Not dangerous goods

**15. REGULATORY INFORMATION**

**OSHA Hazards**

Combustible Liquid, Irritant

**TSCA Status**

On TSCA Inventory

**DSL Status**

All components of this product are on the Canadian DSL list.

**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**

Fire Hazard, Acute Health Hazard

**Massachusetts Right To Know Components**

No Components Listed

**Pennsylvania Right To Know Components**

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**New Jersey Right To Know Components**

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**California Prop. 65 Components**

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

**16. OTHER INFORMATION**

**Further information**

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