

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Phthaldialdehyde

Product Number : P1378  
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 : o-Phthalaldehyde  
o-Phthalic dicarboxaldehyde  
Benzene-1,2-dicarboxaldehyde  
OPA

Formula : C<sub>8</sub>H<sub>6</sub>O<sub>2</sub>  
Molecular Weight : 134.13 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>o-Phthalaldehyde</b>			
643-79-8	211-402-2	-	-

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Toxic by ingestion, Skin sensitizer, Corrosive

#### HMIS Classification

Health Hazard: 3

Flammability: 1

Physical hazards: 0

#### NFPA Rating

Health Hazard: 3

Fire: 1

Reactivity Hazard: 0

#### Potential Health Effects

<b>Inhalation</b>	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin burns.
<b>Eyes</b>	Causes eye burns.
<b>Ingestion</b>	Toxic if swallowed. Causes burns.

#### 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

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

##### In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 5. FIRE-FIGHTING MEASURES

##### Flammable properties

Flash point 132 °C (270 °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. Evacuate personnel to safe areas.

##### 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 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 inhalation of vapour or mist.  
Normal measures for preventive fire protection.

##### 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.

Recommended storage temperature: 4 °C

Light sensitive. Moisture sensitive. Store under inert gas.

## 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

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form                      liquid

### Safety data

pH	no data available
Melting point	55 - 58 °C (131 - 136 °F)
Boiling point	83 °C (181 °F) at 1.067 hPa (0.800 mmHg)
Flash point	132 °C (270 °F) - closed cup
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Water solubility	no data available
Partition coefficient: n-octanol/water	log Pow: 0.934

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Materials to avoid

Oxidizing agents, Amines, Strong bases

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

LD50 Oral - rat - 178 mg/kg

LD50 Dermal - rat - > 2,000 mg/kg

**Irritation and corrosion**

Skin - rabbit - Corrosive - OECD Test Guideline 404

**Sensitisation**

Maximisation Test - guinea pig - Causes sensitization. - OECD Test Guideline 406

**Chronic exposure**

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.

Genotoxicity in vitro - Ames test - negative

**Signs and Symptoms of Exposure**

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Skin** May be harmful if absorbed through skin. Causes skin burns.

**Eyes** Causes eye burns.

**Ingestion** Toxic if swallowed. Causes burns.

**Additional Information**

RTECS: TH6950000

**12. ECOLOGICAL INFORMATION****Elimination information (persistence and degradability)**

no data available

**Ecotoxicity effects**

Toxicity to fish LC50 - *Oncorhynchus mykiss* (rainbow trout) - 0.072 mg/l - 96 h

Toxicity to daphnia and other aquatic EC50 - *Daphnia magna* (Water flea) - 0.087 mg/l - 48 h

invertebrates.

#### Further information on ecology

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic organisms.

### 13. DISPOSAL CONSIDERATIONS

#### Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

### 14. TRANSPORT INFORMATION

#### DOT (US)

UN-Number: 2923 Class: 8 (6.1) Packing group: II  
Proper shipping name: Corrosive solids, toxic, n.o.s. (o-Phthalaldehyde)  
Marine pollutant: No  
Poison Inhalation Hazard: No

#### IMDG

UN-Number: 2923 Class: 8 (6.1) Packing group: II EMS-No: F-A, S-B  
Proper shipping name: CORROSIVE SOLID, TOXIC, N.O.S. (o-Phthalaldehyde)  
Marine pollutant: No

#### IATA

UN-Number: 2923 Class: 8 (6.1) Packing group: II  
Proper shipping name: Corrosive solid, toxic n.o.s. (o-Phthalaldehyde)

### 15. REGULATORY INFORMATION

#### OSHA Hazards

Toxic by ingestion, Skin sensitizer, Corrosive

#### 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

Acute Health Hazard

#### Massachusetts Right To Know Components

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

#### Pennsylvania Right To Know Components

o-Phthalaldehyde

CAS-No.  
643-79-8

Revision Date

**New Jersey Right To Know Components**

o-Phthalaldehyde

CAS-No.  
643-79-8

Revision Date

**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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