

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Propionitrile  
Product Number : 185590  
Brand : Aldrich  
Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA  
Telephone : +1 800-325-5832  
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Emergency Phone # : (314) 776-6555

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Ethyl cyanide  
Formula :  $C_3H_5N$   
Molecular Weight : 55.08 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Propionitrile</b>			
107-12-0	203-464-4	-	-

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Flammable Liquid, Target Organ Effect, Highly toxic by ingestion, Highly toxic by skin absorption, Irritant

##### Target Organs

Blood, Central nervous system

#### HMIS Classification

Health Hazard: 3  
Chronic Health Hazard: \*  
Flammability: 3  
Physical hazards: 0

#### NFPA Rating

Health Hazard: 3  
Fire: 3  
Reactivity Hazard: 0

#### Potential Health Effects

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	Causes skin irritation. May be fatal if absorbed through skin.
<b>Eyes</b>	Causes eye irritation.
<b>Ingestion</b>	May be fatal 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. Take victim immediately to hospital. 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

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 6 °C (43 °F) - closed cup

Ignition temperature no data available

##### Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

##### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

##### Further information

Use water spray to cool unopened containers.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

##### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

##### Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

#### 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. Store in cool place.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
Propionitrile	107-12-0	TWA	5 mg/m <sup>3</sup>	1993-06-30	US. Department of Labor - Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL) 29 CFR 1910.1000 Air Contaminants.
Remarks	Skin contact does contribute to exposure.				
		TWA	5 mg/m <sup>3</sup>	1989-03-01	US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A
	Skin contact does contribute to exposure. 62FR42018; 08/04/97; Correction amendments to air contaminants.				

**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                      clear, liquid  
Colour                    colourless

## Safety data

pH	no data available
Melting point	-93 °C (-135 °F)
Boiling point	97 °C (207 °F)
Flash point	6 °C (43 °F) - closed cup
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	0.772 g/mL at 25 °C (77 °F)
Water solubility	no data available

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

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

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

### Hazardous reactions

Vapours may form explosive mixture with air.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - rat - 39 mg/kg

LD50 Dermal - rabbit - 45 - 60 mg/kg

### Irritation and corrosion

Skin - rabbit - Mild skin irritation - 24 h

Eyes - rabbit - Moderate eye irritation - 24 h

### Sensitisation

no data available

### 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.

### Signs and Symptoms of Exposure

Lung irritation, Cyanosis, Central nervous system depression

### Potential Health Effects

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	Causes skin irritation. May be fatal if absorbed through skin.
<b>Eyes</b>	Causes eye irritation.
<b>Ingestion</b>	May be fatal if swallowed.
<b>Target Organs</b>	Blood, Central nervous system,

### Additional Information

RTECS: UF9625000

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 1,520 mg/l - 96 h

### Further information on ecology

no data available

## 13. DISPOSAL CONSIDERATIONS

### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. 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: 2404 Class: 3 (6.1) Packing group: II  
Proper shipping name: Propionitrile  
Marine pollutant: No  
Poison Inhalation Hazard: No

### IMDG

UN-Number: 2404 Class: 3 (6.1) Packing group: II EMS-No: F-E, S-D  
Proper shipping name: PROPIONITRILE  
Marine pollutant: No

### IATA

UN-Number: 2404 Class: 3 (6.1) Packing group: II  
Proper shipping name: Propionitrile  
IATA Passenger: Not permitted for transport

## 15. REGULATORY INFORMATION

**OSHA Hazards**

Flammable Liquid, Target Organ Effect, Highly toxic by ingestion, Highly toxic by skin absorption, Irritant

**DSL Status**

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

**SARA 302 Components**

	CAS-No.	Revision Date
Propiononitrile	107-12-0	1991-07-01

**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, Chronic Health Hazard

**Massachusetts Right To Know Components**

	CAS-No.	Revision Date
Propiononitrile	107-12-0	1991-07-01

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
Propiononitrile	107-12-0	1991-07-01

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
Propiononitrile	107-12-0	1991-07-01

**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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