

## SAFETY DATA SHEET

Version 5.3  
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### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	: Paraldehyde		
Product Number	: 743844		
Brand	: Aldrich		
Product Use	: For laboratory research purposes.		
Supplier	: Sigma-Aldrich Canada Co. 2149 Winston Park Drive OAKVILLE ON L6H 6J8 CANADA	Manufacturer	: Sigma-Aldrich Corporation 3050 Spruce St. St. Louis, Missouri 63103 USA
Telephone	: +1 9058299500		
Fax	: +1 9058299292		
Emergency Phone # (For both supplier and manufacturer)	: +1-703-527-3887 (CHEMTREC)		
Preparation Information	: Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956		

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

##### Target Organs

Kidney, Liver, Lungs, Heart, Central nervous system

##### WHMIS Classification

B2	Flammable liquid	Flammable liquid
D2B	Toxic Material Causing Other Toxic Effects	Moderate eye irritant

##### GHS Classification

Flammable liquids (Category 3)  
 Acute toxicity, Oral (Category 4)  
 Serious eye damage (Category 1)

##### GHS Label elements, including precautionary statements

Pictogram



Signal word: Danger

Hazard statement(s)

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H318	Causes serious eye damage.

Precautionary statement(s)

P280	Wear protective gloves/ eye protection/ face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

##### HMIS Classification

Health hazard: 2  
 Chronic Health Hazard: \*

**Flammability:** 3  
**Physical hazards:** 0

#### Potential Health Effects

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin** Harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes eye irritation.  
**Ingestion** Harmful if swallowed.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C6H12O3  
Molecular weight : 132.2 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Paraldehyde</b>			
123-63-7	204-639-8	605-004-00-1	<=100%

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### 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

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

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### 5. FIREFIGHTING MEASURES

#### Conditions of flammability

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

#### 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 firefighting if necessary.

#### Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

#### Explosion data - sensitivity to mechanical impact

No data available

#### Explosion data - sensitivity to static discharge

No data available

#### Further information

Use water spray to cool unopened containers.

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### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions

Use personal protective equipment. Avoid breathing vapours, 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 and materials for containment and cleaning up**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

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## **7. HANDLING AND STORAGE**

### **Precautions for safe 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.

### **Conditions for safe 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.

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## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **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. 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.

##### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 480 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

##### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 30 min

Material tested: Dermatril® P (KCL 743 / Aldrich Z677388, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Eye protection**

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin and body protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Hygiene measures**

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

#### **Specific engineering controls**

Use mechanical exhaust or laboratory fumehood to avoid exposure.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	liquid
Colour	colourless

### Safety data

pH	No data available
Melting point/freezing point	123 - 126 °C (253 - 259 °F) at 933 hPa (700 mmHg)
Boiling point	123 - 124 °C (253 - 255 °F) at 1,013 hPa (760 mmHg)
Flash point	24 °C (75 °F) - closed cup
Ignition temperature	235 °C (455 °F)
Auto-ignition temperature	No data available
Lower explosion limit	1.3 %(V)
Upper explosion limit	17 %(V)
Vapour pressure	13 hPa (10 mmHg) at 20 °C (68 °F)
Density	0.994 g/cm <sup>3</sup>
Water solubility	No data available
Partition coefficient: n-octanol/water	log Pow: 0.50 - 0.95
Relative vapour density	5.3
Odour	sweet
Odour Threshold	No data available
Evaporation rate	No data available

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

Vapours may form explosive mixture with air.

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides  
Other decomposition products - No data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

LD50 Oral - Rat - 1,530 mg/kg

#### Inhalation LC50

No data available

**Dermal LD50**

LD50 Dermal - Rabbit - 14,015.4 mg/kg

**Other information on acute toxicity**

No data available

**Skin corrosion/irritation**

Skin - Rabbit - Open irritation test

**Serious eye damage/eye irritation**

Eyes - Rabbit - Severe eye irritation

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity****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.

**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**

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Ingestion</b>	Harmful if swallowed.
<b>Skin</b>	Harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes eye irritation.

**Signs and Symptoms of Exposure**

rapid breathing, Breathing difficulties, Drowsiness, acidosis, Central nervous system depression, can lead to addiction

**Synergistic effects**

No data available

**Additional Information**

RTECS: YK0525000

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**12. ECOLOGICAL INFORMATION****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

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**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. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION**

**DOT (US)**

UN number: 1264 Class: 3 Packing group: III  
Proper shipping name: Paraldehyde  
Reportable Quantity (RQ): 1000 lbs  
Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**

UN number: 1264 Class: 3 Packing group: III EMS-No: F-E, S-D  
Proper shipping name: PARALDEHYDE  
Marine pollutant: No

**IATA**

UN number: 1264 Class: 3 Packing group: III  
Proper shipping name: Paraldehyde

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**15. REGULATORY INFORMATION**

**WHMIS Classification**

B2	Flammable liquid	Flammable liquid
D2B	Toxic Material Causing Other Toxic Effects	Moderate eye irritant

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

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**16. OTHER INFORMATION**

**Text of H-code(s) and R-phrase(s) mentioned in Section 3**

**Further information**

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