

Material Safety Data Sheet

Version 3.7

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 2-Pyridinecarboxaldehyde

Product Number : P62003

Brand : Aldrich

Supplier : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832

Fax : +1 800-325-5052

Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Combustible Liquid, Toxic by inhalation., Harmful by ingestion., Skin sensitiser, Irritant, Mutagen

GHS Classification

Flammable liquids (Category 4)

Acute toxicity, Oral (Category 4)

Acute toxicity, Inhalation (Category 2)

Acute toxicity, Dermal (Category 5)

Skin irritation (Category 2)

Serious eye damage (Category 1)

Skin sensitisation (Category 1)

Specific target organ toxicity - single exposure (Category 3), Respiratory system

Acute aquatic toxicity (Category 2)

GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H227 : Combustible liquid

H302 : Harmful if swallowed.

H313 : May be harmful in contact with skin.

H315 : Causes skin irritation.

H317 : May cause an allergic skin reaction.

H318 : Causes serious eye damage.

H330 : Fatal if inhaled.

H335 : May cause respiratory irritation.

H401 : Toxic to aquatic life.

Precautionary statement(s)

P260 : Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P280 : Wear protective gloves/ eye protection/ face protection.

P284 : Wear respiratory 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.

P310 : Immediately call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard: 2

Chronic Health Hazard: *

Flammability: 2

Physical hazards: 0

NFPA Rating

Health hazard: 2

Fire: 2

Reactivity Hazard: 0

Potential Health Effects

Inhalation : Toxic if inhaled. Causes respiratory tract irritation.

Skin : Harmful if absorbed through skin. Causes skin irritation.

Eyes : Causes eye irritation.

Ingestion : Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Picolinaldehyde
Pyridine-2-aldehyde

Formula : C₆H₅NO

Molecular Weight : 107.11 g/mol

Component	Concentration
Pyridine-2-carbaldehyde	
CAS-No.	1121-60-4
EC-No.	214-333-6
	90 - 100 %

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. 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 fire fighting if necessary.

Hazardous combustion products

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

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Wear respiratory protection. 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. Discharge into the environment must be avoided.

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). Keep in suitable, closed containers for disposal.

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.

Recommended storage temperature: 2 - 8 °C

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. 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.

Splash contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 120 min

Material tested: Butoject® (KCL 897 / Aldrich Z677647, 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, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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 brown

Safety data

pH 6.0 - 7.0 at 111 g/l at 20 °C (68 °F)
Melting point/freezing point Melting point/range: -21 °C (-6 °F)
Boiling point 181 °C (358 °F) - lit.
Flash point 77 °C (171 °F)
Ignition temperature no data available
Auto-ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Vapour pressure 1.2 hPa (0.9 mmHg) at 20 °C (68 °F)
Density 1.126 g/cm3 at 25 °C (77 °F)
Water solubility completely miscible
Partition coefficient: n-octanol/water log Pow: 0.714
Relative vapour density no data available
Odour characteristic
Odour Threshold no data available
Evaporation rate no data available

10. STABILITY AND REACTIVITY**Chemical stability**

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Strong oxidizing agents, Strong bases, Acids

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION**Acute toxicity****Oral LD50**

LD50 Oral - rat - 585 mg/kg

Inhalation LC50

LC50 Inhalation - rat - 4 h - 0.8 mg/l

Dermal LD50

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

Other information on acute toxicity

no data available

Skin corrosion/irritation

Skin - rabbit - Moderate skin irritation - OECD Test Guideline 404

Serious eye damage/eye irritation

Eyes - rabbit - Risk of serious damage to eyes. - OECD Test Guideline 405

Respiratory or skin sensitisation

May cause allergic skin reaction.

no data available

Germ cell mutagenicity

Experiments showed mutagenic effects in cultured bacterial cells.

Genotoxicity in vitro - Ames test - S. typhimurium - positive

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.

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.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects**Inhalation
Ingestion
Skin
Eyes**

Toxic if inhaled. Causes respiratory tract irritation.
Harmful if swallowed.
Harmful if absorbed through skin. Causes skin irritation.
Causes eye irritation.

Signs and Symptoms of Exposure

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

Synergistic effects

no data available

Additional Information

RTECS: Not available

12. ECOLOGICAL INFORMATION**Toxicity**

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 1.3 mg/l - 96 h

NOEC - Oncorhynchus mykiss (rainbow trout) - 1.0 mg/l
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia - 6.9 mg/l - 48 h
Method: OECD Test Guideline 202

NOEC - Daphnia magna (Water flea) - 1.8 mg/l
Method: OECD Test Guideline 202

Persistence and degradability

Biodegradability Result: 82 % - Biodegradable
Method: OECD Test Guideline 301

Bioaccumulative potential

Bioaccumulation is unlikely.

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

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

Toxic to aquatic life.

no data available

13. DISPOSAL CONSIDERATIONS**Product**

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. 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.

14. TRANSPORT INFORMATION**DOT (US)**

UN number: 2810 Class: 6.1 Packing group: II
Proper shipping name: Toxic, liquids, organic, n.o.s. (Pyridine-2-carbaldehyde)
Reportable Quantity (RQ):
Marine pollutant: No
Poison Inhalation Hazard: No

Aldrich - P62003
Delivery 0846316667-000010 Purchase Order 0000000050

Page 6 of 7

Page 5 of 7

Aldrich - P62003
Delivery 0846316667-000010 Purchase Order 0000000050

00001888

IMDG

UN number: 2810 Class: 6.1 Packing group: II EMS-No: F-A, S-A
Proper shipping name: TOXIC LIQUID, ORGANIC, N.O.S. (Pyridine-2-carbaldehyde)
Marine pollutant: No

IATA

UN number: 2810 Class: 6.1 Packing group: II
Proper shipping name: Toxic liquid, organic, n.o.s. (Pyridine-2-carbaldehyde)

15. REGULATORY INFORMATION**OSHA Hazards**

Combustible Liquid, Toxic by inhalation., Harmful by ingestion., Skin sensitiser, Irritant, Mutagen

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, Chronic Health Hazard

Massachusetts Right To Know Components

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

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Pyridine-2-carbaldehyde	1121-60-4	

New Jersey Right To Know Components

	CAS-No.	Revision Date
Pyridine-2-carbaldehyde	1121-60-4	

California Prop. 65 Components

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

16. OTHER INFORMATION**Further information**

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