

1. PRODUCT AND COMPANY IDENTIFICATION

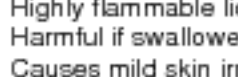
| | |
|-------------------|---|
| Product name | : Pyridine |
| Product Number | : 270407 |
| Brand | : Sigma-Aldrich |
| Company | : Sigma-Aldrich Canada, Ltd 2149 Winston Park Drive OAKVILLE ON L6H 6J8 CANADA |
| Telephone | : +19058299500 |
| Fax | : +19058299292 |
| Emergency Phone # | : 800-424-9300 |

2. HAZARDS IDENTIFICATION**Hazardous Identification Overview****Target Organs**

Kidney, Liver, Bone marrow, Nerves.

WHMIS ClassificationB2 Flammable liquid
D2BFlammable liquid
Severe eye irritant**GHS Label elements, including precautionary statements**

Pictogram



Signal word: Danger

Hazard statement(s)

H225 Highly flammable liquid and vapour.
 H302 + H312 Harmful if swallowed or in contact with skin.
 H316 Causes mild skin irritation.
 H318 Causes serious eye damage.
 H332 Harmful if inhaled.
 H402 Harmful to aquatic life.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 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 : C₅H₅N
 Molecular Weight : 79.1 g/mol

| CAS-No. | EC-No. | Index-No. | Concentration |
|----------|-----------|--------------|---------------|
| Pyridine | | | |
| 110-86-1 | 203-809-9 | 613-002-00-7 | - |

4. FIRST AID MEASURES**General advice**

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

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.

5. FIRE-FIGHTING MEASURES**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 and materials for containment and 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**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. Store in cool place.

Handle and store under inert gas.

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

| Components | CAS-No. | Value | Control parameters | Update | Basis |
|------------|----------|-----------|-------------------------------|------------|---|
| Pyridine | 110-86-1 | TWA | 1 ppm | 2006-11-29 | Canada, British Columbia OEL |
| | | TWAE V | 1 ppm | 2005-12-17 | Canada, Ontario OELs |
| | | TWA | 5 ppm 14 mg/m ³ | 2007-01-01 | Canada, Alberta, Occupational Health and Safety Code (table 2: OEL) |
| | | TWAE V | 5 ppm 16 mg/m ³ | 2006-12-29 | Canada, Quebec OELs |

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

Face shield and 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
 Colour: colourless
 Odour: unpleasant

Safety data

pH: 8.5 at 15.82 g/l at 25 °C (77 °F)
 Melting point: -42 °C (-44 °F) - lit.
 Boiling point: 115 °C (239 °F) - lit.
 Flash point: 17.0 °C (62.6 °F) - closed cup
 Ignition temperature: 482 °C (900 °F)
 Lower explosion limit: 1.8 % (V)
 Upper explosion limit: 12.4 % (V)
 Vapour pressure: 13.3 hPa (10.0 mmHg) at 13.2 °C (55.8 °F)
 26.7 hPa (20.0 mmHg) at 25.0 °C (77.0 °F)
 Density: 0.978 g/cm³ at 25 °C (77 °F)

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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, Strong acids

Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 891.0 mg/kg

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye; P: Behavioral: Somnolence (general depressed activity). Behavioral: Coma.

LC50 Inhalation - rat - 1 h - 28,500 mg/m³

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye; Lacrima; Behavioral: Somnolence (general depressed activity). Lungs, Thorax, or Respiration: Dyspnea.

LD50 Dermal - rabbit - 1,121 mg/kg

Remarks: Behavioral: Ataxia. Gastrointestinal: Changes in structure or function of salivary glands. Liver: Other changes.

Skin corrosion/irritation

Skin - rabbit - Mild skin irritation - 24 h

Serious eye damage/eye irritation

Eyes - rabbit - Risk of serious damage to eyes. - 24 h

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

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.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Pyridine)

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure (GHS)

no data available

Specific target organ toxicity - repeated exposure (GHS)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion Harmful if swallowed.

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Skin Harmful if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.

Signs and Symptoms of Exposure

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Dizziness, tachycardia, nervousness, insomnia, Skin disorders, loss of appetite

Additional Information

RTECS: UR840000

12. ECOLOGICAL INFORMATION**Toxicity**

Toxicity to fish: LC50 - Pimephales promelas (fathead minnow) - 93.80 mg/l - 96 h
 LC50 - Cyprinus carpio (Carp) - 26.00 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates. EC50 - Daphnia magna (Water flea) - 940.00 mg/l - 48 h

EC50 - Daphnia magna (Water flea) - 1,140.00 mg/l - 48 h

EC50 - Daphnia pulex (Water flea) - 520.00 mg/l - 48 h

Toxicity to algae: EC50 - SELENASTRUM - 100.00 - 180.00 mg/l - 72 h

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

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: 1282 Class: 3 Packing group: II

Proper shipping name: Pyridine

Reportable Quantity (RQ): 1000 lbs

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN-Number: 1282 Class: 3 Packing group: II EMS-No: F-E, S-D

Proper shipping name: PYRIDINE

Marine pollutant: No

IATA

UN-Number: 1282 Class: 3 Packing group: II

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15. REGULATORY INFORMATION**DSL Status**

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

WHMIS ClassificationB2 Flammable liquid
D2BFlammable liquid
Severe eye irritant**16. OTHER INFORMATION****Further information**

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