1. PRODUCT AND COMPANY IDENTIFICATION

Product name: 4-Pyridinecarboxaldehyde
Product Number: P62402
Brand: Aldrich
Supplier: Sigma-Aldrich
Address: 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) 776-6556
Preparation Information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8556

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards: Combustible Liquid, Irritant
GHS Classification: Flammable liquids (Category 4), Skin irritation (Category 2), Eye irritation (Category 2A)
Specific target organ toxicity - single exposure (Category 3)

GHS Label elements, including precautionary statements

Pictogram: 
Signal word: Warning
Hazard statement(s): Combustible liquid, Causes skin irritation, Causes serious eye irritation.
Precautionary statement(s): Avoid breathing dust, fume, gas, mist, vapour/spray.

HMIS Classification:
Health hazard: 2
Flammability: 2
Physical hazards: 0

NFPA Rating:
Health hazard: 2

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Isonicotinaldehyde
Formula: C7H7NO
Molecular Weight: 107.11 g/mol
Component: Isonicotinaldehyde
CAS-No.: 972-85-5
EC-No.: 212-832-3

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.

5. FIREFIGHTING 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 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:
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.
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.
Recommended storage temperature: 2 - 8 °C

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 gloves' 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.

Immersion protection
Material: Fluorinated rubber
Minimum layer thickness: 0.7 mm
Break through time: > 480 min
Material tested: Vitrect® (Aldrich Z677698, Size M)

Splash protection
Material: Chloroprene
Minimum layer thickness: 0.6 mm
Break through time: > 30 min
Material tested: Camagren® (Aldrich Z677493, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6658 873000, 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 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
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Impervious clothing. At 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>clear, liquid</td>
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<tr>
<td>Colour</td>
<td>brown</td>
</tr>
<tr>
<td>Safety data</td>
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<tr>
<td>PH</td>
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<tr>
<td>Melting point</td>
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<tr>
<td>Freezing point</td>
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<tr>
<td>Boiling point</td>
<td>71 - 73 °C (160 - 163 °F) at 13 hPa (10 mmHg) - lt.</td>
</tr>
<tr>
<td>Flash point</td>
<td>82 °C (180 °F) - closed cup</td>
</tr>
<tr>
<td>Ignition temperature</td>
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<tr>
<td>Autoignition temperature</td>
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<tr>
<td>Lower explosion limit</td>
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<tr>
<td>Upper explosion limit</td>
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<td>Vapour pressure</td>
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<td>Density</td>
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<td>n-Octanol/water</td>
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<td>Relative vapour density</td>
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<td>Odour</td>
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<td>Odour Threshold</td>
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<tr>
<td>Evaporation rate</td>
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</table>

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 acids, Strong reducing agents

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 - no data available
Inhalation LC50 - no data available
Dermal LD50 - no data available
Other information on acute toxicity
no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

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.

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 May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion skin May be harmful if swallowed. May be harmful if absorbed through skin. Causes skin irritation.

Eyes Causes eye irritation.

Synergistic effects
no data available

Additional Information
RTECS: NR9400000

12. ECOLOGICAL INFORMATION
Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential

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)
NA-Number: 1993 Class: CBL Packing group: III Proper shipping name: Combustible liquid, n.o.s. (Isonicotinyldehyde) Marine pollutant: No Poison Inhalation Hazard: No

IMDG
Not dangerous goods

IATA
Not dangerous goods

15. REGULATORY INFORMATION
OSHA Hazards
Combustible Liquid, Irriant

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

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

Pennsylvania Right To Know Components
Isonicotinyldehyde CAS-No. 872-85-5 Revision Date

New Jersey Right To Know Components
Isonicotinyldehyde CAS-No. 872-85-5 Revision Date

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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