



Specialized in chemicals

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Material Safety Data Sheet

Pyridine MSDS

Section 1: Chemical Product and Company Identification

Product Name: pyridine

Catalog Codes:

CAS#: 110-86-1

RTECS: UR8400000

TSCA: Not applicable.

CI#: Not applicable.

Synonym: Azabenzene

Chemical Name: 1-propen-3-ol

Chemical Formula: C₃H₆O

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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS # %	By Weight
pyridine	110-86-1	100

Toxicological Data on Ingredients: Not applicable.

Section 3: Hazards Identification

3.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Flammable liquids (Category 2) Acute toxicity, Inhalation (Category 4) Acute toxicity, Dermal (Category 4) Acute toxicity, Oral (Category 4)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Highly flammable. Harmful by inhalation, in contact with skin and if swallowed.

3.2 Labelling according Regulation (EC) No 1272/2008 [CLP]



Signal word Danger

Hazard statement(s)

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H332 Harmful if inhaled.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P280 Wear protective gloves/ protective clothing.

Supplemental Hazard Statements none

According to European Directive 67/548/EEC as amended.



R-phrase(s)

R11 Highly flammable.

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

S-phrase(s)

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28 After contact with skin, wash immediately with plenty of soap and water.

Section 4: First Aid Measures

4.1 Description of first aid measures

General advice

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.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of any immediate medical attention and special treatment needed no data available

Section 5: Fire and Explosion Data

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NO_x)

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

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.

6.2 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.

6.3 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).

6.4 Reference to other sections

For disposal see section 13.

Section 7: Handling and Storage

7.1 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.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. 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.

Handle and store under inert gas.

7.3 Specific end uses no data available

Section 8: Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face 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 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Splash protection

Material: butyl-rubber

Minimum layer thickness: 0,3 mm

Break through time: > 30 min

Material tested: Butoject? (Anonymous Z677647, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 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.

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.

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).

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

- a) Appearance Form: liquid
 Colour: colourless
- b) Odour unpleasant
- c) Odour Threshold no data available
- d) pH 8,5 at 15,82 g/l at 25 °C
- e) Melting point/freezing point Melting point/range: -42 °C - lit.
- f) Initial boiling point and boiling range 115 °C - lit.
- g) Flash point 17,0 °C - closed cup
- h) Evaporation rate no data available
- i) Flammability (solid, gas) no data available
- j) Upper/lower Upper explosion limit: 12,4 %(V)
 flammability or Lower explosion limit: 1,8 %(V)
 explosive limits
- k) Vapour pressure 13,3 hPa at 13,2 °C
 26,7 hPa at 25,0 °C
- l) Vapour density no data available
- m) Relative density 0,978 g/cm³ at 25 °C
- n) Water solubility soluble

- o) Partition coefficient octanol/water: n- log Pow: 0,65

- p) Autoignition temperature 482,0 °C

- q) Decomposition temperature no data available

- r) Viscosity no data available
- s) Explosive properties no data available
- t) Oxidizing properties no data available

9.2 Other safety information no data available

Section 10: Stability and Reactivity Data

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Strong oxidizing agents, Strong acids

10.6 Hazardous decomposition products

Other decomposition products - no data available

Section 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - 891,0 mg/kg

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Ptosis.

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:Lacrimation.

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

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

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

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation

Harmful if inhaled. May cause respiratory tract irritation.

Ingestion	Harmful if swallowed.
Skin	Harmful if absorbed through skin. May cause skin irritation.
Eyes	Causes eye burns.
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: UR8400000	

Section 12: Ecological Information

12.1 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
12.2 Persistence and degradability no data available	
12.3 Bioaccumulative potential no data available	
12.4 Mobility in soil no data available	
12.5 Results of PBT and vPvB assessment no data available	
12.6 Other adverse effects Harmful to aquatic life. no data available	

Section 13: Disposal Considerations

Waste treatment methods
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.
Contaminated packaging Dispose of as unused product.

Section 14: Transport Information

14.1 UN number		
ADR/RID: 1282	IMDG: 1282	IATA: 1282

14.2	UN proper shipping name ADR/RID: PYRIDINE IMDG:PYRIDINE IATA:Pyridine		
14.3	Transport hazard class(es) ADR/RID: 3	IMDG: 3	IATA: 3
14.4	Packaging group ADR/RID: II	IMDG: II	IATA: II
14.5	Environmental hazards ADR/RID: no	IMDG Marine pollutant: no	IATA: no

Section 15: Other Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 **Safety, health and environmental regulations/legislation specific for the substance or mixture** no data available

15.2 **Chemical Safety Assessment** no data available

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we m be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if we have been advised of the possibility of such damages.