



Preparing for the New Era of Laboratories

MATERIAL SAFETY DATA SHEET (MSDS)

According to regulation (EU) no.1907/2006

PYRIDINE 99,5% AR

PRODUCT CODE : B-3067

CAS No : 110-86-1

FORMULA : C_5H_5N

UN No : 1282

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MSDS Number : 0304

Date : Aug 29th, 2024

Version : 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1 Product Name** : PYRIDINE 99,5% AR
Synonyms : Azabenzene, Azine
CAS No. : 110-86-1
HS Code : 2933 31 00
Chemical Formula : C₅H₅N Hill
Molecular Weight : 79.10 g/mol
Product Code : B-3067
Brand : Labotiq
1.2 Manufacturer : Labotiq
Address : Jl.Terapi Raya AD2-Bumi Menteng Asri Bogor, Jawa Barat Indonesia – 16111
Website : www.labotiq.net
Email : labotiq.id@gmail.com
For information : Phone : (+62-251) 839110, 8311662, Fax : (+62-251) 83135710
Emergency number : +6281316894650
1.3 Application : Laboratory chemicals, Manufacture of substances, General Chemical reagent

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 2), H225
 Acute toxicity, Oral (Category 4), H302
 Acute toxicity, Inhalation (Category 4), H332
 Acute toxicity, Dermal (Category 4), H312 Skin irritation (Category 2), H315
 Eye irritation (Category 2), H319

For the full text of the H-Statements mentioned in this Section, see Section 16

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

danger

Hazard statement(s)

H225

Highly flammable liquid and vapour.

H302 + H312 + H332

Harmful if swallowed, in contact with skin or if inhaled

H315

Causes skin irritation.

H319

Causes serious eye irritation.

Precautionary statement(s)

P210

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

P280

Wear protective gloves/ protective clothing.

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P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements

none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Azabenzene, Azine
 Formula : C₅H₅N Hill
 Molecular weight : 79.10 g/mol
 CAS-No. : 110-86-1
 EC-No. : 203-809-9

3.2 Mixture

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Pyridine CAS-No. 110-86-1 EC-No. 203-809-9 Index-No. 613-002-00-7	Flam. Liq. 2; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; H225, H302, H332, H312, H315, H319	<=100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

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. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Small (incipient) fires must be extinguished with alcohol resistant foam, dry chemical powder or carbon dioxide. Large amounts of water are ineffective. Cool containers with large amounts of water

5.2 Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NO_x)

Combustible. Pay attention to flashback. Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing

5.4 Further information

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Advice on safe handling**

Work under hood. Do not inhale substance/mixture.

Avoid generation of vapours/aerosols.

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Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Storage class

Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Derived No Effect Level (DNEL)

Application Area	Routes of exposure	Health effect	Value
Worker DNEL, longterm	inhalation	Systemic effects	2,5 mg/m ³
Worker DNEL, acute	inhalation	Systemic effects	7,5 mg/m ³
Worker DNEL, longterm	dermal	Systemic effects	
Worker DNEL, acute	dermal	Systemic effects	
Consumer DNEL, longterm	inhalation	Systemic effects	0,6 mg/m ³
Consumer DNEL, longterm	dermal	Systemic effects	
Consumer DNEL, longterm	oral	Systemic effects	

Predicted No Effect Concentration (PNEC)

Compartment	Value
Fresh water	0,3 mg/l
Sea water	0,03 mg/l
Aquatic intermittent release	3 mg/l
Sediment	3,2 mg/kg
Sea sediment	0,32 mg/kg
Sewage treatment plant	2 mg/l
Soil	0,46 mg/kg

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.

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Personal protective equipment

Eye/face protection

Face shield and safety glasses 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.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740, Size M)

Splash contact

Material: butyl-rubber

Minimum layer thickness: 0,7 mm

Break through time: 240 min

Material tested: Butoject®

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Form: liquid
	Colour: colourless
Odour	pungent
Odour Threshold	0,0001 ppm
pH	ca.8,81 at 20 °C
Melting point/freezingpoint	Melting point: -42 °C
Initial boiling point and boiling range	115 °C - lit.
Flash point	20 °C - closed cup - ISO 1523
Evaporation rate	12,7
Flammability (solid, gas)	No data available
Upper/lower flammability or	Upper explosion limit: 12.4 %(V)

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explosive limits	Lower explosion limit: 1.8 %(V)
Vapour pressure	ca.26,7 hPa at 25 °C
Vapour density	2,73
Relative density	0,978 g/mL at 25 °C - lit.
Water solubility	ca.1.000 g/l at 20 °C soluble
Partition coefficient: noctanol/water	log Pow: ca.0,64 at 20 °C - (Lit.), Bioaccumulation is not expected.
Auto-ignition temperature	900 °C at 1.013 hPa
Decomposition temperature	No data available
Viscosity	Viscosity, dynamic: ca.0,88 mPa.s at 25 °C
Explosive properties	No data available
Oxidizing properties	none

9.2 Other safety information

Solubility in other	solvents
Diethyl ether at 20 °C -	miscible
Ethanol at 20 °C -	miscible
Surface tension	36,56 mN/m at 25 °C
Dissociation constant	5,25 at 25 °C
Relative vapor density	2,73

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapors may form explosive mixture with air.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Risk of explosion with: perchloric acid
nitrogen oxides halogen-halogen compounds
Risk of ignition or formation of inflammable gases or vapours with: chlorosulfonic acid
chromium(VI) oxide
Acid anhydrides fuming sulfuric acid Oxidizing agents perchromates
Nitric acid nitrogen dioxide
Exothermic reaction with: Fluorine sulfuric acid silver perchlorate

10.4 Conditions to avoid

Warming.

10.5 Incompatible materials

rubber, various plastics, various metals

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 1.500 mg/kg

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Remarks: (ECHA) Symptoms: Vomiting, Nausea
LC50 Inhalation - Rat - male - 4 h - 17,1 mg/l (US-EPA)
Symptoms: mucosal irritations, Cough, Shortness of breath
LD50 Dermal - Rabbit - > 1.000 - 2.000 mg/kg (OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: Mild skin irritation - 24 h (Draize Test)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irritating to eyes. - 24 h

Remarks: (ECHA)

Respiratory or skin sensitisation

Local lymph node assay (LLNA) - Mouse

Result: negative (OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Test Type: Micronucleus test

Species: Mouse Cell type: Bone marrow

Application Route: Intraperitoneal injection

Method: OECD Test Guideline 475

Result: negative

Carcinogenicity

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

Reproductive toxicity

No data available(Pyridine)

Specific target organ toxicity - single exposure

No data available(Pyridine)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available(Pyridine)

Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 102 Weeks - NOAEL (No observed adverse effect level) - 7 mg/kg

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

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knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Systemic effects: After uptake: Headache In high doses: narcosis cardiovascular disorders
Circulatory collapse Chronic uptake results in damage of: Liver Kidney
Good warning effect due to low odour threshold. Other dangerous properties can not be excluded.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish

semi-static test

EC50 - Danio rerio (zebra fish) - 560 - 1.000 mg/l - 96 h (OECD Test Guideline 203) Remarks: (in analogy to similar products)

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 320 mg/l - 48 h (OECD Test Guideline 202)

Remarks: (in analogy to similar products)

Toxicity to algae

static test EC50 - Pseudokirchneriella subcapitata - 320 mg/l - 72 h (OECD Test Guideline 201)

Remarks: (in analogy to similar products)

IC5 - Scenedesmus quadricauda (Green algae) - 120 mg/l - 7 d

Remarks: (maximum permissible toxic concentration) (Lit.)

EC50 - SELENASTRUM - 100,00 - 180,00 mg/l - 72 h

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 97 % - Readily biodegradable. (OECD Test Guideline 301B)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available(Pyridine)

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Harmful to aquatic life.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product

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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

14.6 Special precautions for user

No data available

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

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

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information**Full text of H-Statements referred to under sections 2 and 3.**

H225

Highly flammable liquid and vapor.

H302

Harmful if swallowed.

H302 + H312 + H332

Harmful if swallowed, in contact with skin or if inhaled.

H312

Harmful in contact with skin.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H332

Harmful if inhaled.

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 3

Reactivity: 0

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Labotiq shall not be held liable for any damage resulting from handling or from contact with the above product.

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