

**Pyridine, anhydrous a.r.**

Revision: 05.03.2025

Product code: AC11.00519

Page 1 of 12

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Pyridine, anhydrous a.r.

REACH Registration Number: 01-2119493105-40-XXXX  
CAS No: 110-86-1  
Index No: 613-002-00-7  
EC No: 203-809-9

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Reagents and laboratory chemicals  
Only for laboratory and analysis purposes.

**Uses advised against**

Do not use for private purposes (household).

**1.3. Details of the supplier of the safety data sheet****Details of the supplier of the safety data sheet**

Company name: AnalytiChem Services, Unipessoal, Lda  
Street: Rua de Júlio Dinis 676 7º  
Place: N-4050-320 Porto  
Telephone: +351 226002917  
E-mail: info@analytichem.com  
Contact person: SDS service department  
E-mail: SDS@analytichem.com  
Internet: www.analytichem.com  
Responsible Department: SDS service department

**Supplier or manufacturer details**

Company name: AnalytiChem Belgium NV  
Street: Industriezone "De Arend" 2  
Place: B-8210 Zedelgem  
Telephone: +32 50 28 83 20  
E-mail: info.be@analytichem.com  
Contact person: SDS service department  
E-mail: SDS@analytichem.com  
Responsible Department: AnalytiChem  
EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20  
EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200  
EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848  
UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500  
USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378  
Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701  
Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333

**1.4. Emergency telephone number:**

+44 20 3807 3798 (CHEMTREC)

**Pyridine, anhydrous a.r.**

Revision: 05.03.2025

Product code: AC11.00519

Page 2 of 12

**Further Information**

No data available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Flam. Liq. 2; H225

Acute Tox. 4; H332

Acute Tox. 4; H312

Acute Tox. 4; H302

Skin Irrit. 2; H315

Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****Regulation (EC) No 1272/2008**

Signal word: Danger

Pictograms:

**Hazard statements**

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 statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P240 Ground and bond container and receiving equipment.

P302+P352 IF ON SKIN: Wash with plenty of water and soap.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Sum formula: C5H5N

Molecular weight: 79,1 g/mol

## Pyridine, anhydrous a.r.

Revision: 05.03.2025

Product code: AC11.00519

Page 3 of 12

## Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
110-86-1	pyridine			100 %
	203-809-9	613-002-00-7	01-2119493105-40-XXXX	
	Flam. Liq. 2, Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2; H225 H332 H312 H302 H315 H319			

Full text of H and EUH statements: see section 16.

## Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
110-86-1	203-809-9	pyridine	100 %
	inhalation: LC50 = 4900 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = > 1000 - < 2000 mg/kg; oral: LD50 = > 800 - < 1600 mg/kg		

## Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

## SECTION 4: First aid measures

4.1. Description of first aid measures

## General information

No data available

## After inhalation

Provide fresh air.

If breathing is irregular or stopped, administer artificial respiration.

Call a physician immediately.

## After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

## After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Remove contact lenses, if present and easy to do. Continue rinsing.

## After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Irritant

Dyspnoea

Cough

Anaesthetic state

Gastrointestinal complaints

Vomiting

Cardiac arrhythmias / Circulatory collapse

Headache

4.3. Indication of any immediate medical attention and special treatment needed

**Pyridine, anhydrous a.r.**

Revision: 05.03.2025

Product code: AC11.00519

Page 4 of 12

No data available

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**Water spray jet, Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder.**Unsuitable extinguishing media**

no restriction

**5.2. Special hazards arising from the substance or mixture**

Combustible liquid.

Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NO<sub>x</sub>)

Beware of reignition.

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

In case of fire and/or explosion do not breathe fumes.

Avoid contact with skin, eyes and clothes.

**Additional information**

Danger of bursting container.

Use water spray jet to protect personnel and to cool endangered containers.

Suppress gases/vapours/mists with water spray jet.

Move undamaged containers from immediate hazard area if it can be done safely.

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

Keep away from sources of ignition - No smoking.

This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe).

Take action to prevent static discharges.

**For non-emergency personnel**

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert

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

**For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.

Danger of explosion

**6.3. Methods and material for containment and cleaning up**

**Pyridine, anhydrous a.r.**

Revision: 05.03.2025

Product code: AC11.00519

Page 5 of 12

**For containment**

Cover drains.  
Prevent spread over a wide area (e.g. by containment or oil barriers).  
Collect in closed and suitable containers for disposal.  
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

**Other information**

Provide adequate ventilation.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**6.4. Reference to other sections**

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

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

Read label before use. Handle and open container with care.  
When using do not eat, drink, smoke, sniff. Keep container tightly closed.  
Use personal protection equipment. Use extractor hood (laboratory).  
Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation.

**Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.  
Vapours can form explosive mixtures with air.

**Advice on general occupational hygiene**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

**Further information on handling**

Take off immediately all contaminated clothing and wash it before reuse.  
Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary.  
If handled uncovered, arrangements with local exhaust ventilation have to be used.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Hints on joint storage**

Take national regulations into account.

**Further information on storage conditions**

Keep cool. Protect from sunlight.  
storage temperature: +5°C - +30°C

**7.3. Specific end use(s)**

Laboratory chemicals

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

## Pyridine, anhydrous a.r.

Revision: 05.03.2025

Product code: AC11.00519

Page 6 of 12

## Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
110-86-1	Pyridine	5	16		TWA (8 h)	WEL
		10	33		STEL (15 min)	WEL

## DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
110-86-1	pyridine			
Worker DNEL, acute		inhalation	systemic	7,5 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	0,14 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	0,42 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,6 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	0,07 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	2,5 mg/m <sup>3</sup>
Consumer DNEL, long-term		oral	systemic	0,07 mg/kg bw/day

## PNEC values

CAS No	Substance	Value
Environmental compartment		
110-86-1	pyridine	
Freshwater		0,3 mg/l
Freshwater (intermittent releases)		3 mg/l
Marine water		0,03 mg/l
Freshwater sediment		3,2 mg/kg
Marine sediment		0,32 mg/kg
Micro-organisms in sewage treatment plants (STP)		2 mg/l
Soil		0,46 mg/kg

**8.2. Exposure controls****Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Suitable eye protection: goggles.

**Hand protection**

Suitable examples are gloves of KCL GmbH, D-36124 Eichenzell, e-mail: vertrieb@kcl.de with the following specification (test according to EN 374):

By long-term hand contact: No data available

By short-term hand contact

**Pyridine, anhydrous a.r.**

Revision: 05.03.2025

Product code: AC11.00519

Page 7 of 12

Trade name/designation: KCL 897 Butoject®

Butyl caoutchouc (butyl rubber) 0,3 mm

Wearing time with occasional contact (splashes): &gt;219min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

**Skin protection**

Flame-retardant protective clothing. Wear anti-static footwear and clothing

**Respiratory protection**

Respiratory protection necessary at: aerosol or mist formation

Filtering device with filter or ventilator filtering device of type: A

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.

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

Danger of explosion

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	Liquid	<b>Test method</b>
Colour:	colourless	
Odour:	pungent	
Melting point/freezing point:	-42 °C	
Boiling point or initial boiling point and boiling range:	115 °C	
Flammability:	not applicable	
Lower explosion limits:	1,7 vol. %	
Upper explosion limits:	10,6 vol. %	
Flash point:	17 °C	
Auto-ignition temperature:	482 °C	
Decomposition temperature:	~490 °C	
pH-Value (at 20 °C):	~8,81	
Viscosity / kinematic:	No data available	
Water solubility:	~1000 g/l	
(at 20 °C)		
Solubility in other solvents	not determined	
Partition coefficient n-octanol/water:	log Pow: ca. 0,64 (20 °C)	
Vapour pressure:	26,7 hPa	
(at 25 °C)		
Vapour pressure:	No data available	
Density (at 20 °C):	0,982 g/cm³	
Bulk density:	No data available	
Relative vapour density:	not determined	

**9.2. Other information**

**Pyridine, anhydrous a.r.**

Revision: 05.03.2025

Product code: AC11.00519

Page 8 of 12

**Information with regard to physical hazard classes**

Explosive properties

No data available

Sustained combustibility:

No data available

Self-ignition temperature

900°C

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

Not oxidising.

**Other safety characteristics**

Evaporation rate:

not determined

Solvent separation test:

No data available

Solvent content:

No data available

Solid content:

No data available

Sublimation point:

No data available

Softening point:

No data available

Pour point:

No data available

No data available:

Viscosity / dynamic:  
(at 25 °C)

~0,88 mPa·s

Flow time:

No data available

**Further Information**

No data available

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Vapours may form explosive mixtures with air.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Danger of explosion: Nitrogen oxides (NOx), perchloric acid  
Exothermic reaction with: Fluorine, sulphuric acid, silver perchlorate  
Ignition hazard: Oxidising agent, Nitric acid  
chromium trioxide, acid anhydride, perchromates, oleum

**10.4. Conditions to avoid**

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

**10.5. Incompatible materials**

Plastic articles  
Rubber articles  
Metal articles

**10.6. Hazardous decomposition products**

SECTION 5: Firefighting measures

**Further information**

No data available

**SECTION 11: Toxicological information****11.1. Information on hazard classes**

## Pyridine, anhydrous a.r.

Revision: 05.03.2025

Product code: AC11.00519

Page 9 of 12

**Acute toxicity**

Harmful if inhaled.  
 Harmful in contact with skin.  
 Harmful if swallowed.  
 Mucous membrane irritation in the mouth, throat, esophagus and gastrointestinal tract.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
110-86-1	pyridine				
	oral	LD50 > 800 - < 1600 mg/kg	Rat	Study report (1978)	Precedes establishment of guideline and
	dermal	LD50 > 1000 - < 2000 mg/kg	Rabbit	Study report (1973)	OECD Guideline 402
	inhalation (4 h) vapour	LC50 4900 mg/l	Rat	Other company data (1984)	EPA OPPTS 870.1300
	inhalation dust/mist	ATE 1,5 mg/l			

**Irritation and corrosivity**

Skin corrosion/irritation: Causes skin irritation.  
 Serious eye damage/eye irritation: Causes serious eye irritation.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Germ cell mutagenicity: Based on available data, the classification criteria are not met.  
 Carcinogenicity: Based on available data, the classification criteria are not met.  
 Reproductive toxicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

No data available

**Practical experience**

No data available

**11.2. Information on other hazards****Other information**

Liver and kidney damage

**Further information**

Irritant  
 Dyspnoea  
 Cough  
 Anaesthetic state  
 Gastrointestinal complaints  
 Vomiting  
 Cardiac arrhythmias / Circulatory collapse

**Pyridine, anhydrous a.r.**

Revision: 05.03.2025

Product code: AC11.00519

Page 10 of 12

Headache

**SECTION 12: Ecological information****12.1. Toxicity**

Based on available data, the classification criteria are not met.

CAS No	Chemical name	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
110-86-1	pyridine						
	Acute fish toxicity	LC50 1000 mg/l	> 560 - < 320 mg/l	96 h	Danio rerio	Study report (1991)	OECD Guideline 203
	Acute algae toxicity	ErC50	320 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (1991)	OECD Guideline 201

**12.2. Persistence and degradability**

97%, 28d aerob (OECD 301B)

Readily biodegradable (according to OECD criteria).

**12.3. Bioaccumulative potential**

No indication of bioaccumulation potential.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
110-86-1	pyridine	0,64

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of UK REACH.

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

**12.7. Other adverse effects**

Discharge into the environment must be avoided.

**Further information**

Do not empty into drains.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

**Contaminated packaging**

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Land transport (ADR/RID)****14.1. UN number or ID number:**

UN 1282

**14.2. UN proper shipping name:**

PYRIDINE

Revision: 05.03.2025

## Pyridine, anhydrous a.r.

Product code: AC11.00519

Page 11 of 12

<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3
Classification code:	F1
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	33
Tunnel restriction code:	D/E

**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	UN 1282
<b>14.2. UN proper shipping name:</b>	PYRIDINE
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3
Classification code:	F1
Limited quantity:	1 L
Excepted quantity:	E2

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	UN 1282
<b>14.2. UN proper shipping name:</b>	PYRIDINE
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3
Special Provisions:	-
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-E, S-D

**Air transport (ICAO-TI/IATA-DGR)**

<b>14.1. UN number or ID number:</b>	UN 1282
<b>14.2. UN proper shipping name:</b>	PYRIDINE
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3
Limited quantity Passenger:	1 L
Passenger LQ:	Y341
Excepted quantity:	E2
IATA-packing instructions - Passenger:	353
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	364
IATA-max. quantity - Cargo:	60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS:	No
----------------------------	----

**14.6. Special precautions for user**

Warning: Combustible liquid.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

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

**Pyridine, anhydrous a.r.**

Revision: 05.03.2025

Product code: AC11.00519

Page 12 of 12

**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 75

Information according to Directive  
2012/18/EU (SEVESO III):

P5c FLAMMABLE LIQUIDS

**National regulatory information**

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D):

2 - obviously hazardous to water

Skin resorption/Sensitization:

Permeates easily through outer skin and causes poisoning.

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 1,9,12.

**Abbreviations and acronyms**

Flam. Liq. 2: Flammable liquids, hazard category 2

Acute Tox. 4: Acute toxicity, hazard category 4

Skin Irrit. 2: Skin irritation, hazard category 2

Eye Irrit. 2: Eye irritation, hazard category 2

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road )

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

**Relevant H and EUH statements (number and full text)**

H225 Highly flammable liquid and vapour.

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.

**Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Provide appropriate information, instructions and training to users