Pyridine

66213-100ML

Version 2.0 Revision Date 24.03.2020 Supersedes 1

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

1.1. Product identifier

Product name	:	Pyridine
SDS-number	:	000000020213
Type of product	:	Substance
Remarks	:	SDS according to Art. 31 of Regulation (EC) 1907/2006.
Chemical name	:	pyridine
Index-No.	:	613-002-00-7
REACH Registration Number	:	01-2119493105-40

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

Use of the Substance/Mixture	:	Laboratory chemicals
Uses advised against	:	none

1.3. Details of the supplier of the safety data sheet

Company	:	Honeywell Specialty Chemicals Seelze GmbH Wunstorfer Straße 40 30926 Seelze Germany	Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
Telephone	:	(49) 5137-999 0	
Telefax	:	(49) 5137-999 123	
For further information, please contact:	:	PMTEU Product Stewardship: SafetyDataSheet@Honeywell.com	

1.4. Emergency telephone number

Emergency telephone number	:	+1-703-527-3887 (ChemTrec-Transport) +1-303-389-1414 (Medical)
Country based Poison Control Center	:	see chapter 15.1

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Skin irritation Category 2
H315 Causes skin irritation.
Eye irritation Category 2
H319 Causes serious eye irritation.

Flammable liquids Category 2
H225 Highly flammable liquid and vapour.
Acute toxicity Category 4 - Inhalation
H332 Harmful if inhaled.
Acute toxicity Category 4 - Dermal
H312 Harmful in contact with skin.
Acute toxicity Category 4 - Oral
H302 Harmful if swallowed.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms :

Signal word	:	Danger	
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.
		P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
		P280	Wear protective gloves/ eye protection/ face protection.
		P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
		P302 + P352	IF ON SKIN: Wash with plenty of water.
		P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P308 + P313	IF exposed or concerned: Get medical

advice/ attention.

2.3. Other hazards

May cause eye and skin irritation. Results of PBT and vPvB assessment, see chapter 12.5.

SECTION 3: Composition/information on ingredients

3.1. Substance

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

1* - For specific concentration limits see Annexes of 1272/2008

3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.
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:
First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

Inhalation:
When inhaled remove to fresh air and seek medical aid.

Skin contact:
After contact with skin, wash immediately with plenty of water. Consult a physician.

Eye contact:

Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. Remove contact lenses. Get medical attention immediately.

Ingestion:
When swallowed, allow water to be drunk. Call a physician immediately.

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

no data available

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

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms. :

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water spray
Foam
Carbon dioxide (CO2)
Dry powder

Extinguishing media which shall not be used for safety reasons:
High volume water jet

5.2. Special hazards arising from the substance or mixture

Vapours may form explosive mixtures with air.
In case of fire hazardous decomposition products may be produced such as:
carbon oxides (CO, CO2), nitrogen oxides (NOx).

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.
No unprotected exposed skin areas.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.Do not use a solid water stream as it may scatter and spread fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep people away from and upwind of spill/leak. Ensure adequate ventilation.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material.
Pick for disposal in tightly closed containers

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:
Exhaust ventilation at the object is necessary. Avoid formation of aerosol. Take precautionary measures against static discharges.

Advice on protection against fire and explosion:
Keep away from sources of ignition - No smoking. The heavy vapours can overcome a considerable distance up to the source of ignition. Normal measures for preventive fire protection.

Hygiene measures:
General industrial hygiene practice.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:
Store in original container. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature. (Ambient temperature: > 0 < 35°C)

7.3. Specific end use(s)

no additional data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
pyridine	EH40 WEL STEL	33 mg/m3 10 ppm		
pyridine	EH40 WEL TWA	16 mg/m3 5 ppm		
pyridine	EH40 WEL			Listed
pyridine	EU ELV TWA	15 mg/m3 5 ppm		

STEL - Short term exposure limit
TWA - Time weighted average

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
pyridine	Workers / Long-term systemic effects		2,5 mg/m3	Inhalation	
pyridine	Workers / Acute systemic effects		7,5 mg/m3	Inhalation	
pyridine	Workers / Long-term systemic effects		0,14mg/kg bw/d	Skin contact	
pyridine	Workers / Acute systemic effects		0,42mg/kg bw/d	Skin contact	
pyridine	Consumers / Long-term systemic effects		0,6 mg/m3	Inhalation	
pyridine	Consumers / Long-term		0,07mg/kg bw/d	Skin contact	

	systemic effects				
pyridine	Consumers / Long-term systemic effects		0,07mg/kg bw/d	Ingestion	

Component	Environmental compartment / Value	Remarks
pyridine	Fresh water: 0,3 mg/l	Assessment factor: 1000
pyridine	Marine water: 0,03 mg/l	Assessment factor: 10000
pyridine	Sewage treatment plant: 2 mg/l	Assessment factor: 10
pyridine	Fresh water sediment: 3,2 mg/kg dw	
pyridine	Marine sediment: 0,32 mg/kg dw	
pyridine	Soil: 0,46 mg/kg dw	

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.
Ensure that eyewash stations and safety showers are close to the workstation location.
Avoid contact with skin, eyes and clothing.

Personal protective equipment
Respiratory protection:
In the case of vapour formation use a respirator with an approved filter.
Recommended Filter type:
A: Organic vapour type

Hand protection:
Glove material: butyl-rubber
Break through time: > 240 min
Glove thickness: 0,7 mm
Butoject® 898
Gloves must be inspected prior to use.
Replace when worn.

Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.
Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.
Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer reccomends to use the chemical protective glove in practice not longer than 50% of the recomended permeation time.
Manufacturer´s directions for use should be observed because of great diversity of types .
Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:
Safety goggles

Skin and body protection:
Protective suit

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	:	liquid
Colour	:	colourless
Odour	:	unpleasant
molecular weight	:	79,1 g/mol
Melting point/range	:	-42 °C
Boiling point/boiling range	:	115 °C at 1.013 hPa
Flash point	:	20 °C Method: closed cup
Flammability (solid, gas)	:	Not applicable
Ignition temperature	:	482 °C
Lower explosion limit	:	1,8 %(V)

Upper explosion limit	:	12,4 %(V)
Vapour pressure	:	26 hPa at 25 °C
Vapour pressure	:	95 hPa at 50 °C
Density	:	0,98 g/cm3 at 20 °C
Viscosity, dynamic	:	0,88 mPa.s at 25 °C
Viscosity, kinematic	:	no data available
pH	:	ca. 8,8 at 20 °C
Water solubility	:	completely miscible
Partition coefficient: n-octanol/water	:	log Pow 0,65
Relative vapour density	:	no data available
Evaporation rate	:	no data available

9.2 Other Information

The product is hygroscopic.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

No decomposition if used as directed.

10.3. Possibility of hazardous reactions

Vapours may form explosive mixture with air.

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

In case of fire hazardous decomposition products may be produced such as:
carbon oxides (CO, CO2) and nitrogen oxides (NOx).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:
Classification based on Annex VI of regulation 1272/2008/EC.

Acute dermal toxicity:
LD50
Species: Rabbit
Value: > 1.000 - < 2.000 mg/kg
Method: OECD Test Guideline 402

Acute inhalation toxicity:
Classification based on Annex VI of regulation 1272/2008/EC.

Skin irritation:
Species: Rabbit
Result: Mild skin irritation

Eye irritation:
Species: Rabbit
Result: Irritating to eyes.

Respiratory or skin sensitisation:
Not classified due to data which are conclusive although insufficient for classification.

Repeated dose toxicity:
Note: Not classified due to data which are conclusive although insufficient for classification.

Carcinogenicity:
Species: not specified
Note: Not classified due to data which are conclusive although insufficient for classification.
Germ cell mutagenicity:
Note: Not classified due to data which are conclusive although insufficient for classification.

Reproductive toxicity:
Species: not specified
Remarks: Not classified due to data which are conclusive although insufficient for classification.

Aspiration hazard:
no data available

Other information:
Not mutagenic in Ames Test

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:
Not classified due to data which are conclusive although insufficient for classification.

Toxicity to aquatic plants:
no data available

Toxicity to aquatic invertebrates:
no data available

12.2. Persistence and degradability

Biodegradability:
Biodegradation: 97 %
Exposure time: 28 d
Result: Readily biodegradable
Method: OECD 301 B

12.3. Bioaccumulative potential

No bioaccumulation is to be expected (log Pow <= 4).

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

Bioaccumulation is unlikely.

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:
Dispose according to legal requirements.

Packaging:
Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:
Provisions relating to waste:
EC Directive 2006/12/EC; 2008/98/EEC
Regulation No. 1013/2006

For personal protection see section 8.

SECTION 14: Transport information

ADR/RID

UN Number	:	1282
Description of the goods	:	PYRIDINE
Class	:	3
Packaging group	:	II
Classification Code	:	F1
Hazard Identification Number	:	33
ADR/RID-Labels	:	3
Environmentally hazardous	:	no

IATA

UN Number	:	1282
Description of the goods	:	Pyridine
Class	:	3
Packaging group	:	II
Hazard Labels	:	3

IMDG

UN Number	:	1282
Description of the goods	:	PYRIDINE
Class	:	3
Packaging group	:	II
Hazard Labels	:	3
EmS Number	:	F-E, S-D
Marine pollutant	:	no

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Basis	Value	Remarks
Directive 2012/18/EC SEVESO III Listed in Regulation : P5c: FLAMMABLE LIQUIDS	Amount 1: 5.000.000 kg Amount 2: 50.000.000 kg	

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

Poison Control Center

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+)35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	808250143
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
	Munich : 089/19240
Latvia	+37167042473

Other inventory information

US. Toxic Substances Control Act
On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

pyridine	:	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.

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:
EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level
PNEC Predicted no effect level
vPvB Very persistent and very biaccumulative substance
PBT Persistent, bioaccmulative und toxic substance

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