

Safety Data Sheet
according to 1907/2006/EC, Article 31

Revision: 27.05.2009

Printing date 27.05.2009

1 Identification of substance**Product details**

Trade name

Pyridine

Stock number:

43799

Manufacturer/Supplier:

Alfa Aesar
Shore Road
Port of Heysham Industrial Park
Heysham Lancashire LA3 2XY
United Kingdom

Office Tel: +44 (0) 1524 850506

Informing department:

Product safety department.

Emergency information:

Call Carechem 24 at +44 (0) 1865 407333

2 Hazards identification

Hazard designation:

  Xn Harmful
F Highly flammable

Information pertaining to particular dangers for man and environment

R 11 Highly flammable.
R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

GHS label elements

 **Danger**

2.6/2 - Highly flammable liquid and vapour.

 **Danger**

3.1/3 - Toxic if swallowed.
3.1/3 - Toxic in contact with skin.
3.1/4 - Harmful if inhaled.

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/ equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.

Response:

Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
IF ON SKIN: Wash with plenty of soap and water.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.
Specific treatment (see label).
Specific measures (see label).
Rinse mouth.

Storage:

Remove/Take off immediately all contaminated clothing.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO₂, powder or water spray.

Disposal:

Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

Chemical characterization:

Pyridine (CAS# 110-86-1): 100%

Designation: (CAS#)

Identification number(s):

203-809-9

EINECS Number:

613-002-00-7

Index number:

4 First aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.
Instantly wash with water and soap and rinse thoroughly.

After eye contact

Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing

Seek immediate medical advice.

5 Fire fighting measures

Suitable extinguishing agents

Use carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.

Special hazards caused by the material, its products of combustion or flue gases:

Can be released in case of fire:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)

Protective equipment:

Wear self-contained breathing apparatus.
Wear full protective suit.

6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:

Ensure adequate ventilation

Keep away from ignition sources

Measures for cleaning/collecting:

Do not allow material to be released to the environment without proper governmental permits.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

Keep away from ignition sources.

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

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See Section 13 for information on disposal.

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7 Handling and storage

Handling	
Information for safe handling:	Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace.
Information about protection against explosions and fires:	Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Fumes can combine with air to form an explosive mixture.
Storage	
Requirements to be met by storerooms and containers:	Store in cool location.
Information about storage in one common storage facility:	Store away from oxidizing agents. Do not store together with acids. Protect from heat.
Further information about storage conditions:	Keep container tightly sealed. Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection

Additional information about design of technical systems:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Components with critical values that require monitoring at the workplace:	<p>Pyridine</p> <p>ppm</p> <p>ACGIH TLV 5</p> <p>Austria MAK 5</p> <p>Belgium TWA 5</p> <p>Denmark TWA 5</p> <p>Finland TWA 5; 10-STEL (skin)</p> <p>France VME 5; 10-VLE</p> <p>Germany MAK 5; 10-STEL</p> <p>Hungary TWA 5 mg/m³; 10 mg/m³-STEL (skin)</p> <p>Ireland TLV 5; 10-STEL</p> <p>Korea TLV 5</p> <p>Netherlands MAC-TGG 0.3</p> <p>Norway TWA 5</p> <p>Poland TWA 5 mg/m³; 30 mg/m³-STEL (skin)</p> <p>Russia 5 mg/m³-STEL</p> <p>Sweden NGV 5; 10-STEL</p> <p>Switzerland MAK-W 5, 10-KZG-W</p> <p>United Kingdom TWA 5, 10-STEL</p> <p>USA TWA 5</p>
Additional information:	No data
Personal protective equipment	
General protective and hygienic measures	The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.
Breathing equipment:	Use breathing protection with high concentrations.
Protection of hands:	Check protective gloves prior to each use for their proper condition.
Material of gloves	The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Eye protection:	Safety glasses Face protection
Body protection:	Protective work clothing.

9 Physical and chemical properties:

General Information	
Form:	Fluid
Colour:	Colourless
Smell:	Unpleasant
Change in condition	
Melting point/Melting range:	-42°C
Boiling point/Boiling range:	115°C
Sublimation temperature / start:	Not determined
Flash point:	20°C
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Critical values for explosion:	
Lower:	1.8 Vol %
Upper:	12.4 Vol %
Steam pressure:	Not determined
Density at 20°C	0.978 g/cm ³
Solubility in / Miscibility with Water:	Fully miscible

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
Materials to be avoided:	Oxidizing agents Acids Heat
Dangerous reactions:	No dangerous reactions known

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Dangerous products of decomposition: Carbon monoxide and carbon dioxide
Nitrous vitriol gases

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11 Toxicological information**Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	1500 mg/kg (mam)
		1500 mg/kg (mouse)
		891 mg/kg (rat)
Dermal	LDLo	4 gm/kg (guinea pig)
		1000 mg/kg (mouse)
Inhalative	LC50	1 gm/kg (guinea pig)
		1121 mg/kg (rabbit)
Irritation of skin	mild	10000 mg/m ³ (mam)
		28500 mg/m ³ /1H (rat)
		500 mg/24H (rabbit)

Primary irritant effect:**on the skin:**

Irritant for skin and mucous membranes.

on the eye:

Irritant effect.

Sensitization:

No sensitizing effect known.

Other information (about experimental toxicology):

Tumorigenic effects have been observed on tests with laboratory animals.

Mutagenic effects have been observed on tests with bacteria.

Mutagenic effects have been observed on tests with laboratory animals.

Danger by skin resorption.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

IARC-3: Not classifiable as to carcinogenicity to humans.

Additional toxicological information:**12 Ecological information:****General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations**Product:****Recommendation**

Consult state, local or national regulations for proper disposal.

Hand over to disposers of hazardous waste.

Must be specially treated under adherence to official regulations.

Uncleaned packagings:**Recommendation:**

Disposal must be made according to official regulations.

Recommended cleaning agent:

Water, if necessary with cleaning agent.

14 Transport information**Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)****ADR/RID-GGVS/E Class:**

3 (F1) Flammable liquids.

Kemler Number:

33

UN-Number:

1282

Packaging group:

II

Label

3

Designation of goods:

1282 PYRIDINE

Limited quantities (LQ)

LQ4

Transport category

2

Tunnel restriction code

D/E

Maritime transport IMDG/GGVSea:**IMDG/GGVSea Class:**

3

UN Number:

1282

Label

3

Packaging group:

II

EMS Number:

F-E,S-D

Correct technical name:

PYRIDINE

Air transport ICAO-TI and IATA-DGR:**ICAO/IATA Class:**

3

UN/ID Number:

1282

Label

3

Packaging group:

II

Correct technical name:

PYRIDINE

UN "Model Regulation":

UN1282, PYRIDINE, 3, II

15 Regulatory information**Designation according to EC guidelines:****Code letter and hazard designation of product:**Xn Harmful
F Highly flammable**Risk phrases:**

11 Highly flammable.

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Safety phrases: 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
28 After contact with skin, wash immediately with plenty of water.

National regulations**Information about limitation of use:**Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.**Water hazard class:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet: Health, Safety and Environmental Department.**Contact:** Zachariah Holt**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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