OXFORD LAB FINE CHEM LLP

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Oxford
Range of
Laboratory Chemicals

MATERIAL SAFETY DATA SHEET

PYRIDINE 99.5% AR

MSDS CAS: 110-86-1

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product
Product Name: PYRIDINE AR
CAS#: 110-86-1
Synonym: Azabenzene; Azine
Chemical Name: Pyridine AR
Chemical Formula: C_5H_5N

Brand: OXFORD

Details Of The Supplier Of The Safety Data Sheet :

Company identification: **OXFORD LAB FINE CHEM LLP**
Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6,
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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Pyridine AR	110-86-1	100

Toxicological Data on Ingredients: **Pyridine: ORAL (LD50): Acute: 891 mg/kg [Rat]. 1500 mg/kg [Mouse]. DERMAL (LD50): Acute: 1121 mg/kg [Rabbit]. 1000 mg/kg [Guinea pig]. VAPOR (LC50): Acute: 28500 mg/m 1 hours [Rat].**

Section 3: Hazards Identification

Potential Acute Health Effects: **Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation.**

Potential Chronic Health Effects: **CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood, kidneys, liver, mucous membranes, peripheral nervous system, eyes, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.**

Section 4: First Aid Measures

Eye Contact: **Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.**

Skin Contact: **In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.**

Serious Skin Contact: **Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.**

Inhalation: **If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.**

Serious Inhalation: **Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.**

Ingestion: **Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.**

Serious Ingestion: **Not available.**

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 482°C (899.6°F)

Flash Points: CLOSED CUP: 20°C (68°F). (Setaflash)

Flammable Limits: LOWER: 1.8% UPPER: 12.4%

Section 5: Fire and Explosion Data (Continued)

Products of Combustion: These products are carbon oxides (CO, CO2). When Pyridine is heated to decomposition, cyanide fumes are released.

Fire Hazards in Presence of Various Substances: Highly flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances: Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill: Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions: **Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.**

Storage: **Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).**

Section 8: Exposure Controls/Personal Protection

Engineering Controls: **Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.**

Personal Protection: **Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.**

Personal Protection in Case of a Large Spill: **Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.**

Exposure Limits: **TWA: 5 (ppm) from ACGIH (TLV) [United States] TWA: 16 (mg/m3) from ACGIH (TLV) [United States] TWA: 5 (ppm) from OSHA (PEL) [United States] TWA: 15 (mg/m3) from OSHA (PEL) [United States]Consult local authorities for acceptable exposure limits.**

Section 9: Physical and Chemical Properties

Physical state and appearance: **Liquid.**

Odor	**: Sharp, nauseating, fish-like**
Taste	**: Amine**
Molecular Weight	**: 79.1g/mole**
Color	**: Colorless to light yellow.**
pH (1% soln/water)	**: Not applicable.**
Boiling Point	**: 115.3°C (239.5°F)**
Melting Point	**: -42°C (-43.6°F)**

Section 9: Physical and Chemical Properties (Continued)

Critical Temperature	**: 346.78°C (656.2°F)**
Specific Gravity	**: 0.98272 (Water = 1)**
Vapor Pressure	**: 2.4 kPa (@ 20°C)**
Vapor Density	**: 0.982 (Air = 1)**
Volatility	**: Not available.**
Odor Threshold	**: Not available.**
Water/Oil Dist. Coeff.	**: The product is more soluble in oil; log(oil/water) = 0.7**
Ionicity (in Water)	**: Not available.**
Dispersion Properties	**: See solubility in water.**
Solubility	**: Easily soluble in cold water, hot water.**

Section 10: Stability and Reactivity Data

Stability: **The product is stable.**

Instability Temperature: **Not available.**

Conditions of Instability: **Heat, ignition sources (flames, sparks), incompatible materials**

Incompatibility with various substances: **Reactive with oxidizing agents, acids.**

Corrosivity: **Non-corrosive in presence of glass.**

Special Remarks on Reactivity: **Reacts violently with chlorosulfonic acid, chromic acid, maleic anhydride, nitric acid, fuming sulfuric acid, perchromates, beta-propiolactone, silver perchlorate, and sulfuric acid. Contact with strong acids will cause violent splattering. Can react vigorously with oxidizing materials. Pryidine causes maleic anhydride to decompose exothermically. Forms a highly explosive by product with trifluoromethyl hypofluorite in reactions where used as an acid-acceptor.**

Special Remarks on Corrosivity: **Not available.**

Polymerization: **Will not occur.**

Section 11: Toxicological Information

Routes of Entry: **Absorbed through skin. Dermal contact. Inhalation.**

Section 11: Toxicological Information (Continued)

Toxicity to Animals: **WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 891 mg/kg [Rat]. Acute dermal toxicity (LD50): 1000 mg/kg [Guinea pig]. Acute toxicity of the vapor (LC50): 28500 mg/m3 1 hours [Rat].**

Chronic Effects on Humans: **MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. May cause damage to the following organs: blood, kidneys, liver, mucous membranes, peripheral nervous system, eyes, central nervous system (CNS).**

Other Toxic Effects on Humans: **Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant), of inhalation.**

Special Remarks on Toxicity to Animals: **Not available.**

Special Remarks on Chronic Effects on Humans: **May cause cancer based on animal studies.**

Special Remarks on other Toxic Effects on Humans: **Acute Potential Health Effects: Skin: May cause skin irritation. May cause smarting of the skin and first-degree burns upon short exposure or secondary-degree burns upon long exposure. May be readily absorbed through the skin. It may be harmful If absorbed through skin since it may affect respiration (dyspnea) and behavior/central nervous system (e.g. somnolence, ataxia), gastrointestinal tract, and liver. Eyes: Eye contact with vapor may cause eye irritation. Direct contact with liquid may cause severe irritation, corneal damage, and possible eye burns. Inhalation: Inhalation of vapor may be irritating to the respiratory tract and mucous membranes and may affect respiration. Symptoms may include nasal irritation, emphysema, and chronic bronchitis, dyspnea. High level exposures may affect behavior/central nervous system, and peripheral nervous system. Symptoms may include excitement followed central nervous system depression, general anesthetic, somnolence, drowiness, insomnia, mental confusion and depression, headache, fatigue, nervousness, dizziness, incoordination, peripheral weakness or neuropathy, unconciousness, coma. It may also cause back pain, urinary frequency, affect the gastrointestinal tract and cause nausea, vomiting, diarrhea, abdominal pain. Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting, diarrhea, and anorexia (mild to severe depending on amount ingested). It may also affect respiration, cardiovascular system (vasocontriction and lowering of blood pressure), and behavior/central nervous system with symptoms similar to inhalation and including delirium, and hyperpyrexia. Ingestion of large doses (several ounces) may also cause heart, liver, and kidney damage, and coma or possible death due to respiratory failure. Ingestion of smaller doses (2-3 ml) may stimulate bone marrow to increase production of blood platelets. Chronic Potential Health Effects: Prolonged or repeated exposure by inhalation or ingestion may affect behavior/central nervous system**

Section 12: Ecological Information

Ecotoxicity: **Not available.**

Section 12: Ecological Information (Continued)

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation:
The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

Land transport (ADR-RID)
Proper shipping name: PYRIDINE
UN N°: 1282
H.I. nr: 33
ADR - Class: 3
Labelling - Transport: 3: Flammable liquid.
ADR - Group: II

Sea transport (IMDG) [English only]
Proper shipping name: PYRIDINE
UN N°: 1282
IMO-IMDG - Class or division: 3: Flammable liquid.
IMO-IMDG - Packing group: II

Air transport (ICAO-IATA) [English only]
Proper shipping name: PYRIDINE
UN N°: 1282
IATA - Class or division: 3: Flammable liquid.
IATA - Packing group: II

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Section 15: Other Regulatory Information

Federal and State Regulations: **Connecticut hazardous material survey.: Pyridine Illinois toxic substances disclosure to employee act: Pyridine New York release reporting list: Pyridine New York acutely hazardous substances: Pyridine Rhode Island RTK hazardous substances: Pyridine Pennsylvania RTK: Pyridine Massachusetts RTK: Pyridine New Jersey: Pyridine New Jersey spill list: Pyridine Louisiana spill reporting: Pyridine California Director's List of Hazardous Substances: Pyridine TSCA 8(b) inventory: Pyridine SARA 313 toxic chemical notification and release reporting: Pyridine CERCLA: Hazardous substances.: Pyridine: 1000 lbs. (453.6 kg)**

Other Regulations:

OSHA: **Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.**

Other Classifications:

WHMIS (Canada): **CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).**

DSCL (EEC): **R11- Highly flammable. R20/21/22- Harmful by inhalation, in contact with skin and if swallowed. R36/38- Irritating to eyes and skin. S2- Keep out of the reach of children. S36/37- Wear suitable protective clothing and gloves. S46- If swallowed, seek medical advice immediately and show this container or label.**

HMIS (U.S.A.):

Health Hazard: 2
Fire Hazard: 3
Reactivity: 0
Personal Protection: h

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

Health: 3
Flammability: 3
Reactivity: 0
Specific hazard:

Protective Equipment: **Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.**

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Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.

Disclaimer:

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