

# PYRIDINE

GHS Safety Data Sheet

Version No:3

Page 1 of 14

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

PYRIDINE

### OTHER NAMES

C5-H5-N, azabenzene, azine

### PROPER SHIPPING NAME

PYRIDINE

### PRODUCT USE

Used in the synthesis of vitamins and drugs, solvent in waterproofing, rubber chemicals, denaturant for alcohol and antifreeze mixtures, dyeing auxiliary in textiles, solvent in fungicides.

### SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V. INDUSTRIAL ESTATE,

248, WORLI,

MUMBAI- 400030.INDIA.

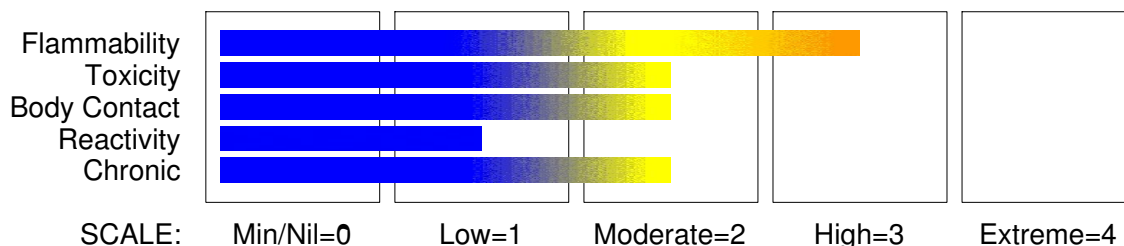
technical@sdfine.com

Telephone: 91- 22- 24959898

Telephone: 91- 22- 24959899

Fax: 91- 22- 24937232

### HAZARD RATINGS



## Section 2 - HAZARDS IDENTIFICATION

### GHS Classification

Acute Toxicity (Dermal) Category 4

Acute Toxicity (Inhalation) Category 4

Acute Toxicity (Oral) Category 4

Eye Irritation Category 2A

Flammable Liquid Category 2

continued...

# PYRIDINE

GHS Safety Data Sheet

Version No:3

Page 2 of 14

## Section 2 - HAZARDS IDENTIFICATION

Respiratory Irritation Category 3  
Skin Corrosion/Irritation Category 3  
Skin Sensitizer Category 1



### EMERGENCY OVERVIEW

#### HAZARD

DANGER

Determined by using GHS criteria:

H335 H225 H302 H312 H332 H316 H319 H317

May cause respiratory irritation

Highly flammable liquid and vapour

Harmful if swallowed

Harmful in contact with skin

Harmful if inhaled

Causes mild skin irritation

Causes serious eye irritation

May cause allergic skin reaction

#### PRECAUTIONARY STATEMENTS

##### Prevention

Wash hands thoroughly after handling.

Ground/bond container and receiving equipment.

Do not eat, drink or smoke when using this product.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Use only outdoors or in a well ventilated area.

Wear protective gloves/clothing

Wear protective gloves and eye/face protection.

Use explosion-proof electrical/ventilating/lighting/equipment

Keep container tightly closed.

Contaminated clothing should not be allowed out of the workplace.

Keep away from heat/sparks/open flame - No smoking.

Use only non-sparking tools.

Take precautionary measures against static discharge

##### Response

Wash contaminated clothing before reuse.

If skin irritation or rash occurs, seek medical advice/attention.

Wear eye/face protection.

If eye irritation persists, get medical advice/attention.

If skin irritation occurs, seek medical advice/attention.

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

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

If on skin or hair: remove/take off immediately all contaminated clothing. Rinse with water/shower.

Specific treatment: refer to Label or MSDS.

In case of fire, use alcohol-type foam for extinction.

Call a POISON CENTER or doctor/physician if you feel unwell.

continued...

# PYRIDINE

GHS Safety Data Sheet

Version No:3

Page 3 of 14

## Section 2 - HAZARDS IDENTIFICATION

IF ON SKIN: Gently wash with plenty of soap and water.

### Storage

Store locked up.

### Disposal

Dispose of contents and container in accordance with relevant legislation.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| NAME     | CAS RN   | %   |
|----------|----------|-----|
| pyridine | 110-86-1 | >95 |

## Section 4 - FIRST AID MEASURES

### SWALLOWED

For advice, contact a Poisons Information Centre or a doctor.

· IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.

· For advice, contact a Poisons Information Centre or a doctor.

Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:

· Induce vomiting with fingers down the back of the of the throat, ONLY IF CONSCIOUS.

· Lean patient forward or place on left side (head-down position if possible) to maintain open airway and prevent aspiration.

NOTE: Wear a protective glove when inducing vomiting by mechanical means.

· In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.

· If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the MSDS should be provided. Further action will be the responsibility of the medical specialist.

· If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the MSDS.

### EYE

If this product comes in contact with the eyes:

· Immediately hold eyelids apart and flush the eye continuously with running water.

· Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

· Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

· Transport to hospital or doctor without delay.

· Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

### SKIN

If skin or hair contact occurs:

· Immediately flush body and clothes with large amounts of water, using safety shower if available.

· Quickly remove all contaminated clothing, including footwear.

· Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.

· Transport to hospital, or doctor.

### INHALED

· If fumes or combustion products are inhaled remove from contaminated area.

continued...

# PYRIDINE

## Section 4 - FIRST AID MEASURES

---

- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor, without delay.

### NOTES TO PHYSICIAN

Treat symptomatically.

---

## Section 5 - FIRE FIGHTING MEASURES

---

### EXTINGUISHING MEDIA

- Alcohol stable foam.
- Dry chemical powder.
- Carbon dioxide.
- Water spray or fog - Large fires only.

### FIRE FIGHTING

Alert Fire Brigade and tell them location and nature of hazard.

- May be violently or explosively reactive.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).

If safe to do so, switch off electrical equipment until vapour fire hazard is removed.

Cool fire exposed containers with water spray from a protected location.

DO NOT approach containers suspected to be hot.

If safe to do so, remove containers from path of fire.

### FIRE/EXPLOSION HAZARD

- Liquid and vapour are flammable.
- Moderate fire hazard when exposed to heat or flame.
- Vapour may travel a considerable distance to source of ignition.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).

Combustion products include:

carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and cyanides.

### FIRE INCOMPATIBILITY

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

Avoid contamination with strong oxidising agents, particularly peroxides, perchlorates, etc. as violent decomposition / detonation may result.

### Personal Protective Equipment

Gas tight chemical resistant suit.

---

## Section 6 - ACCIDENTAL RELEASE MEASURES

---

### EMERGENCY PROCEDURES

#### MINOR SPILLS

Clean up all spills immediately.

Control personal contact by using protective equipment.

continued...

# PYRIDINE

## Section 6 - ACCIDENTAL RELEASE MEASURES

Shut off all possible sources of ignition and increase ventilation.  
Wipe up and absorb small quantities with vermiculite or other absorbent material.  
Place in suitable containers for disposal.

### MAJOR SPILLS

Alert Fire Brigade and tell them location and nature of hazard.  
Clear area of personnel and move upwind.  
Pollutant - contain spillage.  
· May be violently or explosively reactive.  
· Wear full body protective clothing with breathing apparatus.  
· Prevent, by any means available, spillage from entering drains or water and water courses.  
Shut off all possible sources of ignition and increase ventilation.  
Stop leak if safe to do so.  
Any electric cleaning equipment must be explosion proof.  
Contain spill with sand, earth or vermiculite.  
Water spray or fog may be used to disperse vapour.  
Collect recoverable product into labelled containers for recycling.  
Cover spill with soda ash or slaked lime, mixed and sprayed with water.  
Absorb spill with sand, earth, inert material or vermiculite.  
Collect, using a spark-free shovel, and seal in labelled drums for disposal.  
Wash spill area with large quantities of water.  
If contamination of drains or waterways occurs, advise emergency services.

### EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:

pyridine 1000 ppm

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:

pyridine 25 ppm

other than mild, transient adverse effects without perceiving a clearly defined odour is:

pyridine 15 ppm

The threshold concentration below which most people will experience no appreciable risk of health effects:

pyridine 5 ppm

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

|                 |               |               |              |
|-----------------|---------------|---------------|--------------|
| Very Toxic (T+) | $\geq 0.1\%$  | Toxic (T)     | $\geq 3.0\%$ |
| R50             | $\geq 0.25\%$ | Corrosive (C) | $\geq 5.0\%$ |
| R51             | $\geq 2.5\%$  |               |              |
| else            | $\geq 10\%$   |               |              |

where percentage is percentage of ingredient found in the mixture

**Personal Protective Equipment advice is contained in Section 8 of the MSDS.**

## Section 7 - HANDLING AND STORAGE

### PROCEDURE FOR HANDLING

Use good occupational work practice.  
Avoid breathing vapours and contact with skin and eyes.

# PYRIDINE

GHS Safety Data Sheet

Version No:3

Page 6 of 14

## Section 7 - HANDLING AND STORAGE

Avoid smoking, naked lights or ignition sources.  
Wear protective clothing when risk of exposure occurs.  
and secure containers when dispensing or pouring product.  
Use spark-free tools when handling.  
until atmosphere has been checked.  
Avoid contact with incompatible materials.  
Keep containers securely sealed when not in use.  
When handling, DO NOT eat, drink or smoke.  
Wash hands with soap and water after handling.  
Launder contaminated clothing before re-use.

### SUITABLE CONTAINER

Packaging as recommended by manufacturer.  
· Check that containers are clearly labelled.  
Glass container.  
Steel drum.  
Metal can.  
Metal drum.  
Plastic containers may only be used if approved for flammable liquids.

### STORAGE INCOMPATIBILITY

Segregate from strong acids and strong oxidisers.

### STORAGE REQUIREMENTS

Observe manufacturer's storing and handling recommendations.  
Store in original containers in approved flame-proof area.  
Store in a cool area and away from sunlight.  
Store in a well-ventilated area.  
No smoking, naked lights, heat or ignition sources.  
Store away from incompatible materials.  
Protect containers against physical damage.  
DO NOT store in pits, depressions, basements or areas where vapours may be trapped.  
Store at ambient temperatures.  
Keep containers securely sealed.

### SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+: May be stored together

O: May be stored together with specific preventions

X: Must not be stored together

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

The following materials had no OELs on our records

• pyridine: CAS:110- 86- 1

### EMERGENCY EXPOSURE LIMITS

Material  
pyridine

Revised IDLH Value (mg/m3)

Revised IDLH Value (ppm)  
1, 000

continued...

# PYRIDINE

## ODOUR SAFETY FACTOR (OSF)

OSF=29 (PYRIDINE)

Exposed individuals are reasonably expected to be warned, by smell, that the Exposure Standard is being exceeded.

Odour Safety Factor (OSF) is determined to fall into either Class A or B.

The Odour Safety Factor (OSF) is defined as:

OSF= Exposure Standard (TWA) ppm/ Odour Threshold Value (OTV) ppm

Classification into classes follows:

| Class | OSF     | Description   |
|-------|---------|---|
| A     | 550     | Over 90% of exposed individuals are aware by smell that the Exposure Standard (TLV- TWA for example) is being reached, even when distracted by working activities |
| B     | 26- 550 | As " A" for 50- 90% of persons being distracted   |
| C     | 1- 26   | As " A" for less than 50% of persons being distracted   |
| D     | 0.18- 1 | 10- 50% of persons aware of being tested perceive by smell that the Exposure Standard is being reached  |
| E     | <0.18   | As " D" for less than 10% of persons aware of being tested  |

## MATERIAL DATA

Odour Threshold Value: 0.23-1.9 ppm (detection), 0.74 ppm (recognition)

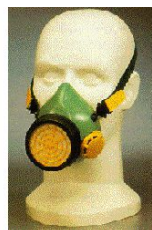
NOTE: Detector tubes for pyridine, measuring in excess of 5 ppm, are commercially available.

The margin of safety associated with the TLV-TWA is thought to minimise the potential risk of systemic pyridine intoxication.

Nauseating 'fishy ' odour gives some warning of exposure but this is unreliable guide due to olfactory fatigue.

Odour is generally regarded as objectionable above 10 ppm.

## PERSONAL PROTECTION



### EYE

- Close fitting gas tight goggles.
- Full face shield.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal

# PYRIDINE

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

### HANDS/FEET

- Barrier cream and Butyl rubber gloves or Neoprene gloves.
- PVC gloves.
- Rubber boots.

### OTHER

- Overalls.
- PVC Apron.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.
- Ensure there is ready access to a safety shower.

### GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the: "Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the computer-generated selection: pyridine

Protective Material CPI \*.

|          |   |
|----------|---|
| BUTYL    | A |
| PVA      | C |
| NEOPRENE | C |

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

### RESPIRATOR

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

| Breathing Zone Level<br>ppm (volume) | Maximum Protection<br>Factor | Half- face Respirator | Full- Face Respirator |
|--------------------------------------|------------------------------|-----------------------|-----------------------|
| 1000                                 | 10                           | AK- AUS               | -                     |
| 1000                                 | 50                           | -                     | AK- AUS               |
| 5000                                 | 50                           | Airline *             | -                     |
| 5000                                 | 100                          | -                     | AK- 2                 |
| 10000                                | 100                          | -                     | AK- 3                 |
|                                      | 100+                         |                       | Airline**             |

\* - Continuous Flow

\*\* - Continuous-flow or positive pressure demand.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

continued...

# PYRIDINE

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

For further information consult your Occupational Health and Safety Advisor.

### ENGINEERING CONTROLS

Use in a well-ventilated area.

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.

An approved self contained breathing apparatus (SCBA) may be required in some situations. Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

|   |  |
|---|--|
| Type of Contaminant:<br>solvent, vapours, degreasing etc., evaporating from tank (in still air).  | Air Speed:<br>0.25- 0.5 m/s (50- 100 f/min.) |
| aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5- 1 m/s (100- 200 f/min.)                 |
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)  | 1- 2.5 m/s (200- 500 f/min.)                 |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).  | 2.5- 10 m/s (500- 2000 f/min.)               |

Within each range the appropriate value depends on:

Lower end of the range

1: Room air currents minimal or favourable to capture

2: Contaminants of low toxicity or of nuisance value only.

3: Intermittent, low production.

4: Large hood or large air mass in motion

Upper end of the range

1: Disturbing room air currents

2: Contaminants of high toxicity

3: High production, heavy use

4: Small hood- local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

# PYRIDINE

---

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

---

### APPEARANCE

Slightly yellow or colourless flammable liquid. Strong alkaline reaction.  
Soluble in water, alcohol, ether, acetone and benzene.  
Analytical grades may be packed under nitrogen.

### PHYSICAL PROPERTIES

Liquid.  
Mixes with water.

Molecular Weight: 79.10  
Melting Range (°C): - 42  
Solubility in water (g/L): Miscible  
pH (1% solution): 8.5 (0.2M sol)  
Volatile Component (%vol): 100  
Relative Vapour Density (air=1): 2.73  
Lower Explosive Limit (%): 1.8  
Autoignition Temp (°C): 482  
State: Liquid

Boiling Range (°C): 115.5  
Specific Gravity (water=1): 0.982 @ 20 C  
pH (as supplied): Not available  
Vapour Pressure (kPa): 1.5 @ 20 C  
Evaporation Rate: Not available  
Flash Point (°C): 20  
Upper Explosive Limit (%): 12.4  
Decomposition Temp (°C): Not available  
Viscosity: Not available

log Kow (Sangster 1997): 0.65  
log Kow: 0.64-1.04

---

## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

---

### CONDITIONS CONTRIBUTING TO INSTABILITY

Storage in unsealed containers.  
· Presence of incompatible materials.  
· Product is considered stable.  
· Hazardous polymerisation will not occur.

---

## Section 11 - TOXICOLOGICAL INFORMATION

---

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.  
Considered an unlikely route of entry in commercial/industrial environments.

##### EYE

Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.  
Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.  
The vapour is highly discomforting.

# PYRIDINE

## Section 11 - TOXICOLOGICAL INFORMATION

Pyridine, its derivatives and homologues, may produce local irritation on contact with the cornea.

The material may produce severe irritation to the eye causing pronounced inflammation.

Repeated or prolonged exposure to irritants may produce conjunctivitis.

### SKIN

Skin contact with the material may be harmful; systemic effects may result following absorption.

The material is not thought to be a skin irritant (i.e. is unlikely to produce irritant dermatitis as described in EC Directives using animal models). Temporary discomfort, however, may result from prolonged dermal exposures. Good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

and it is absorbed by skin.

Sensitisation may result in allergic dermatitis responses including rash, itching, hives or swelling of extremities.

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

### INHALED

Limited evidence exists, or practical experience predicts, that the material produces irritation of the respiratory system in a significant number of individuals following inhalation.

Inhalation of vapour may aggravate a pre-existing respiratory condition such as asthma, bronchitis, emphysema.

Pyridine, its derivatives and homologues, may produce local irritation on contact with the mucous membranes. Overexposure to pyridine and some of its derivatives and homologues may produce headache, nausea, loss of consciousness, nervousness, loss of appetite, sleeplessness and narcosis.

### CHRONIC HEALTH EFFECTS

Principal routes of exposure are usually by.

skin contact/absorption and inhalation of vapour.

Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes. [PATTYS].

The material may accumulate in the human body and progressively cause tissue damage.

Chronic exposures may show kidney and liver changes as systemic effects.

The most important effect of pyridine inhalation is chronic poisoning involving the liver, kidneys and bone marrow. Mild symptoms of central nervous system injury have also been reported following chronic exposure. to 6-12 ppm.

Repeated ingestion of low levels may result in cirrhosis of the liver.

Administration of 1.8-2.5 ml/day for 2 months produced severe liver and kidney injury.

### TOXICITY AND IRRITATION

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

#### TOXICITY

Oral (rat) ; : LD50 891 mg/kg

Inhalation (rat) ; : LCLo 4000 ppm/4h

Dermal (rabbit) ; : LD50 1121 mg/kg

Flaccid paralysis, ptosis, general anaesthesia, sleep, somnolence, tremor, ataxia, coma, dyspnae, respiratory depression recorded.

The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

#### IRRITATION

Skin (rabbit):10mg/24h(open)- Mild

Skin (rabbit):500 mg/24h - Mild

Eye (rabbit): 2 mg (open)- SEVERE

# PYRIDINE

---

## Section 12 - ECOLOGICAL INFORMATION

---

|  |            |
|--|------------|
| Algae IC50 (72hr.) (mg/l):   | 28- 120    |
| log Kow (Sangster 1997):   | 0.65       |
| log Pow (Verschueren 1983):  | 0.64/1.04  |
| BOD5:  | 1.15 (52%) |
| COD:   | 0.02 (2%)  |
| ThOD:  | 2.23       |
| Half- life Soil - High (hours):                                      | 168        |
| Half- life Soil - Low (hours):                                       | 24         |
| Half- life Air - High (hours):                                       | 1284       |
| Half- life Air - Low (hours):  | 128        |
| Half- life Surface water - High (hours):                             | 168        |
| Half- life Surface water - Low (hours):                              | 24         |
| Half- life Ground water - High (hours):                              | 336        |
| Half- life Ground water - Low (hours):                               | 48         |
| Aqueous biodegradation - Aerobic - High (hours):                     | 168        |
| Aqueous biodegradation - Aerobic - Low (hours):                      | 24         |
| Aqueous biodegradation - Anaerobic - High (hours):                   | 672        |
| Aqueous biodegradation - Anaerobic - Low (hours):                    | 168        |
| Aqueous biodegradation - Removal secondary treatment - High (hours): | 99%        |
| Photolysis maximum light absorption - High (nano- m):                | 256.5      |
| Photooxidation half- life water - High (hours):                      | 2.10E+05   |
| Photooxidation half- life water - Low (hours):                       | 5.40E+03   |
| Photooxidation half- life air - High (hours):                        | 1284       |
| Photooxidation half- life air - Low (hours):                         | 128        |

log Kow: 0.64-1.04  
Half-life (hr) air: 384-768  
Half-life (hr) H2O surface water: 90  
Henry's atm m<sup>3</sup> /mol: 7.00E-03  
BOD 5 if unstated: 0-1.47,52%  
COD: 0.02-0.05  
ThOD: 2.23-3.13  
Toxicity Fish: LC50(96)22.5-110mg/L  
Toxicity invertebrate: LC50(96)1-25ug/L  
processes Abiotic: oxid

---

## Section 13 - DISPOSAL CONSIDERATIONS

---

- Consult manufacturer for recycling options and recycle where possible .
- Consult State Land Waste Management Authority for disposal.
- Incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

### WASTE DISPOSAL PROCEDURES

- Collect and package recoverable quantities of pyridine into labelled containers for incineration. To dispose of small quantities wear eye protection , protective clothing and rubber gloves to control personal contact from pyridine.

### SPILLAGE DISPOSAL

- Wear butyl rubber gloves, protective clothing and eye protection to control personal contact from pyridine. Cover and contain the spill with a 1:1:1

# PYRIDINE

## Section 13 - DISPOSAL CONSIDERATIONS

mixture  
by weight of sodium carbonate or calcium carbonate, bentonite and sand. Add  
solid sodium bisulphite until the solution is colourless. Empty the clear  
liquid  
portion into the drain and discard the solid residue with normal refuse [Armour  
1996].

## Section 14 - TRANSPORTATION INFORMATION



Labels Required: FLAMMABLE LIQUID  
HAZCHEM: 2WE

### UNDG:

|                          |                |      |
|--------------------------|----------------|------|
| Dangerous Goods Class: 3 | Subrisk:       | None |
| UN Number: 1282          | Packing Group: | II   |
| Shipping Name: PYRIDINE  |                |      |

### Air Transport IATA:

|                          |                    |      |
|--------------------------|--------------------|------|
| ICAO/IATA Class: 3       | ICAO/IATA Subrisk: | None |
| UN/ID Number: 1282       | Packing Group:     | II   |
| Special provisions: None |                    |      |
| Shipping Name: PYRIDINE  |                    |      |

### Maritime Transport IMDG:

|                         |                     |      |
|-------------------------|---------------------|------|
| IMDG Class: 3           | IMDG Subrisk:       | None |
| UN Number: 1282         | Packing Group:      | II   |
| EMS Number: F- E, S- D  | Special provisions: | None |
| Shipping Name: PYRIDINE |                     |      |

## Section 15 - REGULATORY INFORMATION

### REGULATIONS

pyridine (CAS: 110-86-1) is found on the following regulatory lists;  
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk  
International Agency for Research on Cancer (IARC) Carcinogens  
International Council of Chemical Associations (ICCA) - High Production Volume List  
OECD Representative List of High Production Volume (HPV) Chemicals

## Section 16 - OTHER INFORMATION

# PYRIDINE

GHS Safety Data Sheet

Version No:3

Page 14 of 14

Section 16 - OTHER INFORMATION

---

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

Issue Date: 20-Jun-2017