Date of compilation	:	April 03, 2014
File Name	:	0001Gj Ghs14 Div.2 sds Pyridine ACS
Revision Number	:	14
Date of Issue	:	January 25, 2024
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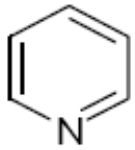
Supersedes date	:	January 01, 2024
Supersedes version	:	0001Gj Ghs13 Div.2 sds Pyridine ACS

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

PRODUCT NAME	: Pyridine ACS
CAS RN	: 110-86-1
EC#	: 203-809-9
SYNONYMS	: Azabenzene, Azine, Pyridine 1 degree, Pyridine
SYSTEMATIC NAME	: Pyridine
MOLECULAR FORMULA	: C_5H_5N
STRUCTURAL FORMULA	



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

1.2.1. Relevant identified uses

Pyridine ACS is used directly in the denaturation of alcohol (ACGIH 1986; HSDB 1989; NSC 1978) and as a solvent in paint and rubber preparation (ACGIH 1986; HSDB 1989; NSC 1978) and in extracting plant hormones (Santodonato et al. 1985). Pyridine is used as an intermediate in making various insecticides and herbicides for agricultural applications (ACGIH 1986; Harper et al. 1985; Santodonato et al. 1985). Pyridine goes into the production of piperidine (Harper et al. 1985; Santodonato et al. 1985), which is commercially significant in the preparation of chemicals used in rubber vulcanization and agriculture (NSC 1978). Pyridine is also used as an intermediate in the preparation of drugs (antihistamines, steroids, sulfa-type and other antibacterial agents) dyes, water repellents, and polycarbonate resins (ACGIH 1986; Harper et al. 1985; NSC 1978; Santodonato et al. 1985).

Uses advised against: None

1.3. Details of the supplier of the safety data sheet

Jubilant Ingrevia Limited
FACTORY & REGISTERED OFFICE: Jubilant Ingrevia Limited, Bhartiagram, Gajraula, District: Amroha, Uttar Pradesh-244223, India
T +91-5924-267437 & +91-5924-267438

HEAD OFFICE: Jubilant Ingrevia Limited, Plot 1-A, Sector 16-A, Institutional Area, Noida, Uttar Pradesh, 201301 - India
T +91-120-4361000 - F +91-120-4234881 / 84 / 85 / 87 / 95 / 96 support@jubl.com - www.jubilantingrevia.com

1.4. Emergency telephone number

For Chemical Emergency ONLY (in the case of fire, leak, spill, exposure or accident) Call
Chemtrec: 1-800-424-9300 (US), 1-703-527-3887 (Outside U.S.)
Chemtrec (India) : 000-800-100-7141

For ALL other emergencies call Emergency Control Room Gajraula at 99970 22412

SECTION 2: HAZARD(S) IDENTIFICATION

2.1. Classification of the substance or mixture

GHS-US classification
Flammable Liquid: Category 2
Acute Toxicity Dermal: Category 4
Acute Toxicity Inhalation: Category 4
Acute Toxicity Oral: Category 4
Skin corrosion/ irritation: Category 2
Serious eye damage/eye irritation: Category 2

2.2. Label Elements

Hazard Pictogram: GHS02; GHS 07

Signal Word: Danger!

HAZARD AND PRECAUTIONARY STATEMENTS:

HAZARD STATEMENTS

- H225: Highly flammable liquid and vapour.
- H302: Harmful if swallowed.
- H312: Harmful in contact with skin.
- H332: Harmful if inhaled.
- H315: Causes skin irritation
- H319: Causes serious eye irritation.

PRECAUTIONARY STATEMENTS

- P241: Use explosion-proof electrical/ventilating/light/equipment
- P210: Keep away from heat/sparks/open flames/hot surfaces.No smoking.
- P243: Take precautionary measures against static discharge.
- P264: Wash thoroughly after handling.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P260: Do not breathe dust/fume/gas/mist/vapours/spray.
- P233: Keep container tightly closed.
- P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P332+P313: If skin irritation occurs: Get medical advice/attention.
- P362: Take off contaminated clothing and wash before reuse.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313: If eye irritation persists: Get medical advice/ attention.
- P321: Specific treatment (see on the label).
- P312: Call a POISON CENTER or doctor/physician if you feel unwell.
- P403+P233: Store in a well-ventilated place. Keep container tightly closed.
- P405: Store locked up.
- P501: Dispose of contents/container to local/regional/national/international regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical	CAS #	EC No.	Purity	GHS CLASSIFICATION
Pyridine ACS	110-86-1	203-809-9	~ 100%	Flammable Liquid: Category 2 Acute Toxicity Dermal: Category 4 Acute Toxicity Inhalation: Category 4 Acute Toxicity Oral: Category 4 Skin corrosion/ irritation: Category 2 Serious eye damage/eye irritation: Category 2

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

- **Eyes**: Rinse eyes immediately with large amounts of water for at least 15 minutes, occasionally lifting the eyelids. GET MEDICAL ATTENTION.
- **Dermal/Skin:** Wash exposed area twice with soap and water. The exposed area should be examined by medical personnel if irritation or pain persists after the area has been washed.
- **Inhalation:** Remove from exposure area to fresh air immediately. If breathing has stopped, give artificial respiration. Keep affected person warm and at rest. GET MEDICAL ATTENTION.
- **Ingestion**: If swallowed, contact physician or poison control center immediately. Give oxygen if respiration is shallow. GET MEDICAL ATTENTION. Do not give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.
- **Notes to physician:** No specific indications. Treatment should be based on the judgment of the physician in response to the reactions of the patient.

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

- **Acute:**

Pyridine is moderately to severely irritating to skin, eyes and mucous membranes. Vapors may be irritating to the respiratory tract. Pyridine is readily absorbed through the skin. Extended exposure (e.g. from saturated clothing) may lead to systemic poisoning. Symptoms may include headache, dizziness, drowsiness, nausea, and other effects. Symptoms seen after inhalation overexposures are expected to be essentially the same as those listed previously. Ingestion of several ounces of pyridine has resulted in severe vomiting, diarrhea, high fever, delirium and death. Ingestion is not likely to be a primary route of exposure.

- **Delayed Effects:**
  None known.

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

- Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

- *Appropriate extinguishing media*: Dry chemical powder, carbon dioxide, and alcohol resistant foam. Water may also be used. Water sprays can be effective in cooling down the fire-exposed containers and knocking down the vapors. Water jets may be used to flush spills away and dilute the same to non-flammable mixtures.

5.2. Special hazards arising from the substance or mixture

- **Hazardous Products of Combustion:** Toxic vapors may be released upon thermal decomposition (cyanides, nitrogen oxides, carbon monoxide).
- **Potential for Dust Explosion:** Not applicable.
- **Special Flammability Hazards:** Severe explosion hazard in the form of vapor (within flammability limits) when exposed to heat, flame or static discharge.

5.3. Advice for firefighters

- Wear self-contained breathing apparatus and full protective clothing (i.e., Bunker gear). Skin and eye contact should be avoided. Normal firefighting procedures may be used.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

- Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

6.2. Environmental precautions

- Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3. Methods and materials for containment and cleaning up

- Large spills should be collected mechanically (remove by pumping) for disposal. Ventilate the area. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4. Reference to other sections

- Refer to section 8 for information on selecting personal protective equipment. Refer to section 13 for information on spilled product, absorbent and clean up material disposal instructions.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

- Use good occupational work practice.
- Avoid breathing vapours and contact with skin and eyes.
- Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).
- Wear protective gloves, eye/face protection and protective clothing.
- Ground and secure containers when dispensing or pouring product.
- Use explosion proof equipment and non-sparking tools.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Wash hands thoroughly after usage
- Launder contaminated clothing before re-use.
- Use in a well-ventilated place/Use protective clothing commensurate with exposure levels.
- If on skin or hair, IMMEDIATELY remove all contaminated clothing and rinse/shower with plenty of water.
- Ensure adequate ventilation, especially in confined areas.

7.2 Storage

- Store at room temperature in a dry and well ventilated place
- Store in a flame proof area
- Store away from incompatible materials, away from direct light.
- Keep securely closed when not in use.
- Protect containers against physical damage.
- Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure Limits Values

Exposure Limits 1 ppm= 3.235 mg/m

Source	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m3	ppm	mg/m3
Australia	5	16		
Austria	5	15	20	60
Belgium	1	3,3		
Canada - Ontario	1			
Canada - Québec	5	16		
Denmark	5	15	10	30
Finland	1	3	5 (1)	16 (1)
France	5	15	10	30
Hungary		15		60
Ireland	5	15	10 (1)	30 (1)
Latvia	5	15		
New Zealand	5	16		
People's Republic of China		4		
Poland		5		30
Romania	5	15		
Singapore	5	16		
South Korea	2	6		
Spain	1	3		
Sweden	2	7	3 (1)	10 (1)
Switzerland	5	15	10	30
The Netherlands		0,9		
Turkey	5	15		
USA - NIOSH	5	15		
USA - OSHA	5	15		
United Kingdom	5	16	10	33

Remarks

European Union	Indicative Occupational Exposure Limit Values, proposal [5]
Finland	(1) 15 minutes average value
Ireland	(1) 15 minutes reference period

Sweden	(1) 15 minutes average value

8.2 Exposure Controls

- Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. Local ventilation is usually preferred. Ensure that eyewash stations and safety showers are close to the workstation location.

.Personal Protection

- Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.
- **Eyes**: Safety goggles/ Chemical Safety glasses and Face shield.
- **Clothing**: Boots and clothing to prevent contact.
- **Respirator:** Follow a respiratory program that may be locally applicable such as OSHA 1910.134 or EN 149. Always use an approved respirator. Air purifying respirators will not work in oxygen deficit areas. Use an appropriate filter (Type A or K under EN 149 for organic chemicals).
- **Hands:** Wear appropriate protective gloves to prevent skin exposure.
  Protective gloves:
  Material ratings: Check manufactures data
  Butyl>3 hrs
  Neop/natural rubber<1 hr
  PE Gloves: 1-3 hrs
  PE/EVAL/PE>3 hrs
  Responder fabric>3 hrs
- **Feet:** Safety Boots

General Industrial hygiene:

- Immediately change contaminated clothing
- Apply skin protective barrier cream
- Wash hands and face after working with the substance
- Under no circumstances eat or drink at the workplace
- Do not inhale substances, work under hood.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties.

Sr.No.	Parameter	Typical value
1.	Appearance	Colorless to pale yellow liquid
2.	Odor	Fish like nauseating odor
3.	Odor Threshold	0.23 ppm (low)-1.9 ppm
4.	pH	8.5
5.	Melting point/Freezing point	(-) 41.6 °C
6.	Boiling Point	115.2 °C
7.	Flash point	20^0C closed cup (68^0F)
8.	Evaporation rate (n-BuAc=1)	1.37 (n-Butyl acetate= 1)
9.	Flammability	Highly flammable liquid
10.	Upper/lower flammability or Explosive limits	1.8%-12.4% v/v in air
11.	Vapor pressure	26.7 hPa @20°C
12.	Vapor density (air=1)	2.73 (Air=1)
13.	Relative density	0.982
14.	Solubility	Very soluble in water, Soluble in alcohols, ether and hydrocarbons
15.	Partition coefficient : n-(Octonol / water)	0.64 at 20^0C
16.	Auto-ignition temperature	482.2°C (900^0F)
17.	Decomposition temperature	Not available
18.	Viscosity	0.879 mPa · s (dynamic) at 20^0C

19.	Explosive property	Not explosive
20.	Oxidizing property	Not oxidizing
21.	pKa (@250C)	5.23
22.	Molecular weight	79.1
23.	Azeotrope	Azeotrope with3m/m water b.p.92-30C

SECTION 10: STABILITY AND REACTIVITY

- **Reactivity:** No hazardous reactions if stored and handled as prescribed/indicated. Not classified as dangerously reactive
- **Stability:** Stable at normal temperatures and pressures. May form flammable/explosive vapour-air mixture. Highly flammable liquid and vapour.
- **Possibility of Hazardous reaction:** Hazardous polymerization will not occur. Reacts with : Incompatible materials.
- **Conditions to avoid:** Static discharges, high temperatures, incompatible chemicals, moist conditions. Open flame. Direct sunlight. Ignition sources.
- **Incompatible chemicals:** Strong oxidizing agents, strong acids. Pyridine reacts violently with chlorosulfonic acid, chromic acid, maleic anhydride, nitric acid, Fuming sulfuric acid, perchromates, beta-propiolactone, silver perchlorate, & sulfuric acid.
- **Hazardous decomposition products:** Fume. Carbon monoxide. Carbon dioxide. Nitrogen oxides (NOx). May release flammable gases. Hydrogen cyanide. May release azardous fumes..
- **Hazardous Polymerization**: Not expected.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Dermal: Harmful in contact with skin. Inhalation: dust, mist: Harmful if inhaled.

Pyridine ACS (110-86-1)	
LD50 oral Mouse	1500 mg/kg
LD50 oral	891 mg/kg
LD50 dermal rabbit	1121 mg/kg bw
LC50 inhalation rat (mg/m3)	28500 mg/m3/1h
LC50 inhalation rat (mg/m3)	4900ppm/4h
LC50 inhalation Mammal species (mg/m3)	10000 mg/m3

Skin corrosion/irritation : Corrosive.
Irreversible damage to the skin occurred at both 24 and 48 hours after a 4 hour exposure of intact skin to pyridine
Pyridine, applied undiluted to intact and abraded rabbit skin, was corrosive at 24 and 72 hours.

Serious eye damage/irritation : moderately irritating
Pyridine was evaluated as a moderate eye irritant with corneal damage in rabbits.

Respiratory or skin sensitisation : Not sensitising

Germ cell mutagenicity : No information is available and no adverse mutagenic effects are anticipated (No classification for mutagenicity as none of the components is classified for mutagenicity)

Carcinogenicity : Not classified
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : No data available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Pyridine ACS (110-86-1)	
LC50 for fresh water fish	560 mg/l 96h
EC50/LC50 for freshwater invertebrates	320 mg/L
EC50/LC50 for freshwater algae	320mg/L

EC50 or LC50 for microorganisms:	20mg/L

12.2. Persistence and degradability

Pyridine ACS (110-86-1)	
Persistence and degradability	Pyridine was tested in several guideline biodegradability protocols, along with many other chemical substances in a comparison of the effectiveness of the protocols to simulate biodegradation situations. Pyridine displayed over 97% biodegradation rates in the Coupled Units (OECD 303A), Sturm (OECD 301B) and Zahn-Wellens (OECD 302B) tests. Some biodegradation (15%) was found in the MITI (OECD 301C) test, but the value was below the "pass" criteria. No biodegradation was observed in the OECD 301A and 301D (screening) tests. The conclusion is that pyridine is biodegradable in some but not all guideline test protocols. [Gerike and Fischer 1979]

12.3. Bioaccumulative potential

Pyridine ACS (110-86-1)	
Bioconcentration factor (BCF REACH)	3.162L/Kg wet wt.
Log BCF	0.500
Bioaccumulative potential	Low bioaccumulation potential in both aquatic and terrestrial habitats.

12.4. Mobility in soil

Pyridine ACS (110-86-1)	
Mobility in soil	The absorbability of pyridine was 0.095 g/g activated charcoal. The estimated Koc for pyridine was 71.72 L/kg (equivalent to log Koc = 1.8557).

12.5. Other adverse effects

Additional information : Avoid release to the environment

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

- **Important:** Always check for local and federal laws that may be applicable. Obtain the help of a professional, if required. Waste may be classified as toxic and ignitable.
- **Classification:** This chemical may be classified as a hazardous waste. In USA generators of waste involving this chemical classified as U196 (Pyridine), F005 and D038 will have to conform to laws applicable for storage, transport, treatment and disposal.
- **Disposal Methods:**
- Landfill: Will not be recommended in most circumstances. In USA under the Toxicity Characteristic Leaching Procedure (TCLP) the waste will carry the waste code for pyridine if the TCLP levels exceed 5%. 40 chemicals including pyridine are currently listed in this procedure. Incineration: Controlled incineration whereby the nitrogen oxides are removed by scrubbing, catalytic or thermal means is recommended. A suitable solvent may be considered for dilution, which may be fed to an incineration unit equipped with an after burner and scrubber. A potential candidate for rotary kiln incineration at a temperature range of 820 to 1,600 deg C and residence times of seconds for liquids and gases, and hours for solids. A potential candidate for liquid injection incineration at a temperature range of 650 to 1,600 deg C and a residence time of 0.1 to 2 seconds. A potential candidate for fluidized bed incineration at a temperature range of 450 to 980 deg C and residence times of seconds for liquids and gases, and longer for solids. [USEPA; Engineering Handbook for Hazardous Waste Incineration p.3-15 (1981) EPA 68-03-3025]
- Photolysis: Photolysis of pyridine at low pH that may be catalytically or oxygen assisted may be used to dispose pyridine. [United Nations. Treatment and Disposal Methods for Waste Chemicals (IRPTC File). Data Profile Series No. 5. Geneva, Switzerland: United Nations Environmental Program, Dec. 1985. 274]
- **Precautions**: Laws may be applicable to containers and equipment rinsates. Disposal procedures and methods must take into account the toxicity and flammability hazard.
- Exert extra care in igniting, as this material is highly flammable.

- Dispose of this material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws. Note that disposal regulations may also apply to empty containers and equipment rinsates.

SECTION 14: TRANSPORT INFORMATION

This substance is considered to be hazardous for transport by Air/Rail/Road and Sea and thus regulated by IMO/ IMDG/ IATA/ ICAO/ US DOT.

S.No	Agency	UN Number	Proper Shipping name	Hazard Class		Packing Group
Land Transport	DOT	UN 1282	Pyridine	**3**	Flammable liquid.	II
Maritime Transport	IMDG	UN 1282	PYRIDINE	**3**	Flammable liquid.	II
Air Transport	IATA	UN 1282	Pyridine	**3**	Flammable liquid.	II
Hazard Label						
Hazchem	2WE (Applicable for surface transport in India. UK, Australia and several countries)					
Air Transport	ERG Code: 3L					
Marine Pollutant	This chemical is not a marine pollutant but is nevertheless harmful to the environment.					

SECTION 15: REGULATORY INFORMATION

European Union Information

EC# 203-809-9

Classification as per CLP Regulation 1272/2008:

- Flam. Liq. 2; Acute Tox(Oral/Dermal/Inhalation) Cat 4; Skin corrosion/ irritation: Cat. 2; Serious eye damage/eye irritation: Cat. 2
- **Hazards Statements:** H225; H302; H312; H332; H315; H319

Global Chemical Inventories

USA TSCA:	Listed	**EINECS:**	203-809-9
Canada(DSL/NDSL):	DSL	**Japan:**	5-710
Korea:	KE-29929	**Australia:**	Listed
China:	Listed	**Philippines**:	Listed
Taiwan:	Listed	**New Zealand:**	Listed
Thailand Harmful Chemicals	Listed (List I)		

US information

- **RTK lists:** Pyridine can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota &Massachusetts.
- **California Prop 65:** Present
- **Clean Air Act:** CAS# 110-86-1 does not contain any hazardous air pollutants.
  This material does not contain any Class 1 or 2 Ozone depletory substances.
- **Clean Water Act:**
  CAS# 110-86-1 is not listed as a Hazardous Substance under the CWA.
  CAS#110-86-1 is not listed as a Priority Pollutant under the CWA.
  CAS#110-86-1 is not listed as Toxic Pollutant under the CWA.
- **CERCLA Chemical:** Yes **CERCLA RQ lbs:** 1000
- **EPCRA EHS Chemical:** No **EPCRA TPQ lbs:** Not applicable
- **EPCRA 313 Chemical:** Yes **RCRA : U196 CHRIS:** PRD
- German Water Hazard Classification: ID Number 179, hazard class 2 - hazard to waters (Pyridin)

- SARA 313: Pyridine = 1.0 percent de minimis concentration
- Reportable Quantities: 1000 lbs. (121.5 gallons)

SECTION 16: OTHER INFORMATION

a) Compilation information of safety data sheet

Date of compilation	: April 03, 2014
Chemical	: Pyridine ACS
CAS #	: 110-86-1
File Name	: 0001Gj Ghs14 Div.2 sds Pyridine ACS
Revision Number	: 14
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b) A key or legend to aberrations and acronyms used in the safety data sheet

- PBT =Persistent Bio accumulative and Toxic.
- vPvB= Very Persistent and Very Bio accumulative.
- SCBA= Self Contained Breathing Apparatus.
- RTECS= Registry of Toxic Effects of Chemical Substances.
- NTP=National Toxicology Program.
- IARC= International Agency for Research on Cancer.
- EPA=Environmental Protection Agency.
- TSCA= Toxic Substances Control Act.
- CERCLA= Comprehensive Environmental Response, Compensation, and Liability Act.
- SARA= Superfund Amendments and Reauthorization Act.
- NFPA= National Fire Protection Association.
- WHIMS= Workplace Hazardous Materials Information System.
- DSL/NDSL= Domestic/Non-Domestic Substances List.
- CSR=Chemical Safety Report.
- BCF = Bio Concentration Factor.
- DNEL = Derived No Effect Level.
- PNEC = Predicted No Effect Concentration.
- TLV = Threshold Limit Value.
- ACGIH = American Conference of Governmental Industrial Hygienists.
- REACH = Registration, Evaluation Authorization and Restriction of Chemicals.
- CLP = Classification, Labelling and Packaging.
- \LD / LC = Lethal Doses / Lethal Concentration.
- GHS = Globally Harmonized System.
- ADR = Accord European relative au transport international de merchandises.
- IMDG-Code = International Maritime Code for Dangerous Goods.
- ICAO = International Civil Aviation Organization.
- IATA/DGR= International Air Transport Association/Dangerous Goods Regulation.

c) Key Literature reference and sources for data

Biographical reference and data sources

- Globally Harmonized System of Classification and Labelling of Chemicals.
- CLP REG (regulation) (EC) no. 1272/2008, last modification by regulation (EC) no. 790/2009.
- National Library of Medicine, Department of Health and Human Services, Hazardous Substances Data Bank (HSDB)
- IARC monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, WHO International Research on Cancer.
- Pyridine and Pyridine Derivatives High Production Volume (HPV) Chemicals Category Assessment of Data Availability and Test Plan December 17,2003.

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

(End of Safety Data Sheet)