



## 2-Hydroxypyridine

### Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of Compilation	: June 13, 2014
Date of Revision	: March 07, 2024
Due Date of Revision	: February, 2027
Revision Number	: 09
Version Number	: 0126Gj Ghs09 Div.3 sds 2-Hydroxypyridine
Supersedes date	: January 02, 2024
Supersedes version	: 0126Gj Ghs08 Div.3 sds 2-Hydroxypyridine

## 2-Hydroxypyridine

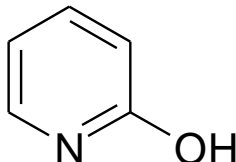
### Safety Data Sheet

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#### SECTION 1: Identification

##### 1.1. Identification

**PRODUCT NAME** : 2-Hydroxy pyridine  
**CAS RN** : 142-08-5  
**EC#** : 205-520-3  
**SYNONYMS** : 2-Hydroxypyridine; 2-Oxopyridine; 2-Pyridol; 2-Pyridone; 2-Pyridyl alcohol; beta-Hydroxypyridin; m-Hydroxypyridine  
**SYSTEMATIC NAME** : 2-Pyridinol  
**MOLECULAR FORMULA** : C<sub>5</sub>H<sub>5</sub>NO  
**STRUCTURAL FORMULA**



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

- It is used as an intermediate in pharmaceutical industry.

##### 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](mailto:support@jubl.com) - [www.jubilantingrevia.com](http://www.jubilantingrevia.com)

##### 1.4. Emergency telephone number

For Chemical Emergency (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

#### SECTION 2: Hazard(s) identification

##### 2.1. Classification of the substance or mixture

###### GHS CLASSIFICATION

Acute Toxicity oral: Category 3  
Skin corrosion / irritant: Category 2  
Serious eye damage/eye irritation: Category 2A  
Specific target organ toxicity: Category 3  
(After single exposure)

**Hazard Pictogram:** GHS 06, GHS 07

**Signal Word:** Danger!



###### HAZARD AND PRECAUTIONARY STATEMENTS:

###### HAZARD STATEMENTS

- H301 Toxic if swallowed.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H335: May cause respiratory irritation.

###### PRECAUTIONARY STATEMENTS

- P264: Wash hands thoroughly after handling.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P270: Do not eat, drink or smoke when using this product.
- P271: Use only outdoors or in a well-ventilated area.



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- P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P330: Rinse mouth.
- P302+352: IF ON SKIN: Wash with plenty of soap and water.
- P332+313: If skin irritation occurs: Get medical advice/attention.
- P362: Take off contaminated clothing and wash before reuse.
- P305+351+338: IF IN EYES: Rinse continuously 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.
- P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P312: Call a POISON CENTER or doctor/physician if you feel unwell.
- P403+233: 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

Substance	CAS No.	EC#	Purity	GHS-US Classification
2-Hydroxy pyridine	141-86-6	205-520-3	~98%	Acute Toxicity oral: Category 3 H301 Skin corrosion / irritant: Category 2 H315 Serious eye damage/eye irritation: Category 2A H319 Specific target organ toxicity: Category 3 H335 (After single exposure)

### SECTION 4: FIRST AID MEASURES

#### 4.1. Description of first aid measures.

- **Eyes:** If in eyes rinse cautiously with water for at least 15 minutes. Remove contact lenses if easy to do so. Continue rinsing. Seek medical attention.
- **Skin:** Immediately take off all contaminated clothing. Wash thoroughly with water for at least 15 minutes. Wash contaminated clothes before reuse. Seek immediate medical attention.
- **Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if you feel unwell. Monitor for respiratory distress. Apply artificial respiration if not breathing. Do not use mouth-to-mouth methods if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Toxic vapours may be released on thermal decomposition including nitrogen oxides, carbon monoxide and cyanide.
- **Ingestion:** If swallowed call a poison center if you feel unwell. Rinse mouth. INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

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

##### Acute effects:

- 2-Hydroxypyridine is irritating to eyes, respiratory system and skin.

##### Chronic effects:

- To the best of our knowledge chronic effects of this compound have not been fully investigated.

#### 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. Do not use water jet or fog (spray) to extinguish. Water can be effective in cooling down the fire-exposed containers and knocking down the vapours. Water jets may be used to flush spills away and dilute the same to non-flammable mixtures fog or alcohol-resistant foam by directing streams to the periphery of the fires to prevent spread.



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#### 5.2. Special hazards arising from the substance or mixture.

- Toxic vapors may be released on thermal decomposition including nitrogen oxides, carbon monoxide and carbon dioxide.
- High vapor concentration may result in an explosion hazard.
- Vapors are heavier than air. May travel considerable distance from source and flashback.

#### 5.3. Advice for firefighters

- Evacuate the area and fight fires from a safe distance.
- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions or as per locally valid procedures.
- Fire-fighters must wear Self Contained Breathing Apparatus (SCBA).
- Report any run-off of firewater's contaminated with this chemical as per local and federal procedures applicable.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal precautions, protective equipment and emergency procedures.

##### Minor Spills

- Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate.
- Avoid breathing vapors and contact with skin and eyes.
- Shut off leak source if possible.
- Shut off all possible sources of ignition.
- Wipe up.
- Decontaminate all equipment.
- Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate.
- Alert Emergency Responders and tell them location and nature of hazard.
- Shut off all possible sources of ignition and increase ventilation.
- Stop leaks if possible.
- Clean up all spills immediately following relevant Standard Operating Procedures.
- Avoid breathing vapors and contact with skin and eyes.

#### 6.2. Environmental precautions.

- Clean up all spills immediately following relevant Standard Operating Procedures.
- Inform authorities in event of contamination of any public sewers, drains or water bodies.
- Wipe up.
- Prevent, by any means available, spillage from entering drains or water and watercourses.
- Collect recoverable product into labeled containers for recycling, recovery or disposal.
- Contain spill with sand, earth or vermiculite.
- Spread area with lime or absorbent material, and leave for at least 1 hour before washing.

#### 6.3. Methods and material for containment and cleaning up.

- Clean up all tools and equipment.
- Decontaminate all equipment.

#### 6.4. Reference to other sections.

- For more information please refer to section 8 and 13.

### SECTION 7: HANDLING AND STORAGE

#### 7.1. Precautions for safe handling

- Do not breathe vapor or mist.
- Wear protective gloves/clothing and eye/face protection.
- Wash thoroughly after handling.
- Ground and secure containers when dispensing or pouring product.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Launder contaminated clothing before re-use.
- If on skin or hair, IMMEDIATELY remove all contaminated clothing and rinse/shower with plenty of water.
- Use in a well ventilated place/Use protective clothing commensurate with exposure levels.



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#### 7.2. Conditions for safe storage, including any incompatibilities

- Store at ambient temperature in dry and ventilated place.
- Keep dry & protected from direct sunlight.
- Store away from incompatible materials.
- Keep securely closed when not in use.

#### 7.3. Specific end use(s)

- No data available.

### SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1. Control parameters

##### 8.1.1 Exposure Limits Values

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
2-Hydroxypyridine	Not available	Not available	Not available

##### 8.1.2 Exposure Limits (International):

- Not available.

##### 8.1.3 Derived No-Effect-Levels (DNEL) / Predicted No-effect-concentration (PNEC)

- DNEL and PNEC data not available.

#### 8.2. Exposure controls

##### 8.2.1 Appropriate Engineering 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.

##### 8.2.2. 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.
- **Hands:** Wear appropriate protective gloves to prevent skin exposure.
- **Eyes:** Safety goggles/ Chemical Safety glasses and Face shield.
- **Clothing:** Boots and clothing to prevent contact.
- **Respirator:** Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary. For emergency situations, wear a positive pressure, pressure-demand, full face piece self-contained breathing apparatus (SCBA) or pressure-demand supplied air respirator with escape SCBA and a fully-encapsulating, chemical resistant suit. (EPA,1998).

##### 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 underhood.

### SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1. Information on basic physical and chemical properties.

Sr.No.	Parameter	Typical value
1)	Appearance	Yellow to brown powder
2)	Odor	Characteristic odor
3)	Odor Threshold	Not available
4)	pH	Not available
5)	Melting point/Freezing point	102-109°C
6)	Boiling Point	280-281°C
7)	Flash point	210°C
8)	Evaporation rate (n-BuAc=1)	Not available



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9)	Flammability	Non Combustible liquid
10)	Upper/lower flammability or Explosive limits	Not available
11)	Vapor pressure	Not available
12)	Vapor density (air=1) at 20°C	Not applicable (Solid)
13)	Relative density/Bulk Density	1.39
14)	Solubility	450 g/L in water(at 20°C), Soluble in water and ethanol, slightly soluble in benzene and ether.
15)	Partition coefficient : n-(Octonol / water)	-0.58
16)	Auto-ignition temperature	675 °C
17)	Decomposition temperature	Not available
18)	Viscosity	Not available
19)	Explosive property	No
20)	Oxidizing property	No

#### SECTION 10: STABILITY AND REACTIVITY

##### Reactivity

- Not available.

##### Chemical stability

- Stable under normal temperature and pressures.

##### Possibility of hazardous reactions

- Hazardous Polymerization: Not reported.

##### Conditions to avoid

- Keep away from High temperature, moist condition, mechanical shock, incompatible materials, excess heat.

##### Incompatible materials

- Strong oxidizing agents, strong acids, strong bases, acid chlorides, heavy metal salts.

##### Hazardous decomposition products

- Thermal decomposition may produce carbon monoxide and oxides of nitrogen, carbon dioxide and irritating & toxic fumes.

#### SECTION 11: TOXICOLOGICAL INFORMATION

##### a) **Acute toxicity**

2-Hydroxypyridine is toxic if swallowed and is irritating to skin and respiratory system. It causes serious eye irritation. It is irritating to tissues of the mucous membranes and upper respiratory tract. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound

RTECS#: UV1144050

LD 50(Oral): 124mg/Kg (Rat)

##### b) **Skin corrosion/irritation**

- Causes skin irritation.

##### c) **Serious eye damage/irritation**

- Causes serious eye irritation.

##### d) **Respiratory or skin sensitization**

- No data available.

##### e) **Germ cell Mutagenicity**

- No data is available. It is expected to be Non Mutagenic

##### f) **Carcinogenicity**

- Not listed by NTP, IARC and OSHA.
- Not present on the EU CMR list.
- According to information presently available 2-Hydroxypyridine is not found to be carcinogenic.

##### g) **Reproductive toxicity**

- No data is available.

##### h) **STOT-single exposure**

- May cause respiratory irritation.

##### i) **STOT-repeated exposure**

- No data available.

##### j) **Aspiration Hazards**

- No data available.

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#### SECTION 12: ECOLOGICAL INFORMATION

##### 12.1 Toxicity

##### 12.1.1 Ecotoxicity:

- Fathead minnow LC<sub>50</sub> (96 hr): 88.77mg/l (Predicted Fathead minnow LC50 (96 hr) from Consensus method)
- Daphnia magna LC<sub>50</sub> (48 hr) : 40.32 mg/l (Predicted Daphnia magna LC50 (48 hr) from Consensus method)
- Lower toxic effects are expected for fish and aquatic microorganisms. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

##### 12.2. Persistence and degradability

- Soluble in water, Persistence is unlikely, based on information available

##### 12.3. Bioaccumulative potential

- BCF = 3.162 (Estimated)
- Log Kow = 1.07 (Estimated)
- Bioaccumulation is unlikely

##### 12.4. Mobility in soil (Estimated)

- Koc = 3.79 (Estimated) Low sorption.
- Henry's Law Constant = 1.14E-008 atm/m<sup>3</sup> mole at 25 degrees
- Log Kow = -0.58 (Estimated )
- The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

##### 12.6. Other adverse effects.

- **Endocrine Disruptor Information** : This product does not contain any known or suspected endocrine disruptors
- **Persistent Organic Pollutant** : This product does not contain any known or suspected substance
- **Ozone Depletion Potential** : This product does not contain any known or suspected substance


#### SECTION 13: DISPOSAL CONSIDERATIONS

##### 13.1. Waste treatment methods

- Burn in a chemical incinerator equipped with an after burner and scrubber.
- 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 IATA/ ICAO/ US DOT/ TDG/ IMO/ IMDG

S.No	Agency	UN Number	Proper Shipping name	Hazard Class	Packing Group
Land Transport	ADR/RIC	UN 2811	Toxic solid, organic, n.o.s. (2-hydroxypyridine)	6.1	III
Maritime Transport	IMDG	UN 2811	Toxic solid, organic, n.o.s. (2-hydroxypyridine)	6.1	III
Air Transport	IATA	UN 2811	Toxic solid, organic, n.o.s. (2-hydroxypyridine)	6.1	III
Hazard Label		Toxic 6.1			

##### Environmental hazards:

- Marine pollutant: NO



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#### SECTION 15: REGULATORY INFORMATION

##### Classification as per CLP Regulation 1272/2008:

- **Hazards Class and Category:** Acute Tox.Oral Cat 3 ; Skin Irrit Cat. 2; Eye Irrit Cat 2; STOT SE Cat. 3
- **Hazard Statements:** H301; H315; H319; H335

Chemical Inventory Lists:	Status
TSCA:	Listed (Active)
EINECS:	205-520-3
Canada(DSL/NDSL):	Listed/NDSL
Japan:	5-722
Korea:	KE-29952
Australia:	Listed
China: IECSC	Not Listed
Taiwan	Listed
New Zealand	Listed
Philippines	Listed

##### US information

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):** 2-Hydroxypyridine is not listed

**SARA 302/304 :** 2-Hydroxypyridine is not listed

**SARA 311/312 :** See section 2 for more information

**California Prop. 65:** 2-Hydroxypyridine is not listed

**CAA (Clean Air Act):** 2-Hydroxypyridine is not listed

**CWA (Clean Water Act):** 2-Hydroxypyridine is not listed

##### EU Information

**Water hazard class (WGK):** WGK 3 (Severe hazards to water)

**Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006:** 2-Hydroxypyridine is not listed

#### SECTION 16: OTHER INFORMATION

##### Compilation information of safety data sheet

Date of Compilation : June 13, 2014  
Chemical : 2-Hydroxypyridine  
CAS # : 142-08-5  
File Name : 0126Gj Ghs09 Div.3 sds 2-Hydroxypyridine  
Revision Number : 09  
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##### A key or legend to aberrations and acronyms used in the safety data sheet;

- PBT =Persistent Bioaccumulative and Toxic.
- vPvB= Very Persistent and Very Bioaccumulative.
- SCBA= Self Contained Breathing Apparatus.
- NIOSH REL= National Institute for Occupational Safety and Health Recommended Exposure Limit.
- OSHA PEL=Occupational Safety and Health Administration Permissible Exposure Limit.
- OELTWA= Occupational Exposure Limit Time Weighted Averages.
- IDLH= Immediately Dangerous to Life or Health.
- UEL= Upper Explosive Limit.
- LEL= Lower Explosive Limit.
- RTECS= Registry of Toxic Effects of Chemical Substances.
- NTP=National Toxicology Program.
- IARC= International Agency for Research on Cancer.
- NFPA= National Fire Protection Association.
- WHIMS= Workplace Hazardous Materials Information System.





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- DSL/NDSL= Domestic/Non-Domestic Substances List.
- BCF = Bio Concentration Factor.
- DNEL = Derived No Effect Level.
- PNEC = Predicted No Effect Concentration.
- CLP = Classification, Labelling and Packaging.
- LD / LC = Lethal Doses / Lethal Concentration.
- GHS = Globally Harmonized System.
- IMDG-Code = International Maritime Code for Dangerous Goods.
- EmS = Emergency measures on Sea.
- ICAO = International Civil Aviation Organization.
- IATA/DGR= International Air Transport Association/Dangerous Goods Regulation.

#### 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
- REG (EC) no. 1907/2006, last modification by REG (EC) Nr. 830/2015

#### 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)

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