



2- (Hydroxymethyl) pyridine

Safety Data Sheet

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

Date of Compilation: September 13, 2013

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Version Number: 0102Gj Ghs07 Div.03 sds 2-(Hydroxymethyl) pyridine

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2- (Hydroxymethyl) pyridine

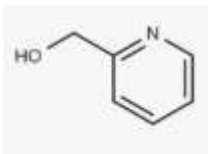
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product identification	: 2- (Hydroxymethyl) pyridine
CAS RN	: 586-98-1
EC#	: 209-592-7
Trade name	: 2- (Hydroxymethyl) pyridine
Systematic Name	: 2-Pyridinemethanol; 2-Pyridylmethanol.
Synonyms	: Piconol; 2-Pyridinemethanol; 2-(Hydroxymethyl) pyridine; 2-Pyridinylmethanol; 2-Pyridylcarbinol; 2-Pyridylmethanol; alpha-Picolyl alcohol; Pyridine-2-carbinol.
Molecular Formula	: C ₆ H ₇ NO
Structural Formula	



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

1.2.1. Relevant identified uses

- 2- (Hydroxymethyl) pyridine is used as an intermediate in pharmaceutical industry.

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, +91-5924-267438252352

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: Hazards identification

2.1. Classification of the substance or mixture

GHS US Classification

Acute Toxicity-Oral: Hazard category: Acute Tox.4 (H302: Harmful if swallowed)

Skin corrosion / irritation: Hazard category: Skin Irrit. 2 (H315: Causes skin irritation)

Serious eye damage/ eye irritation: Hazard category: Eye Irrit. 2A (H319: Causes serious eye irritation.)

Specific target organ toxicity – single exposure: Hazard category: STOT Single Exp. 3 (H335: May cause respiratory irritation.)

2.2. Label elements

Pictograms:



GHS 07 – Exclamation mark



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Signal word: Warning!

Hazard and precautionary statements:

HAZARD STATEMENTS

- H302: Harmful 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.
- P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
- P312 + P313: If skin irritation occurs: Get medical advice/attention.
- P330: Rinse mouth.
- P362: Take off contaminated clothing before reuse.
- 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.
- P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P403 + P233: Store in a well-ventilated place. Keep the container tightly closed.
- P405: Store locked up.
- P501: Dispose of contents/container to local/regional/national/international regulations.

2.3 Other Hazards

- Substance is not classified as PBT nor as vPvB. For further details see section 12.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance	CAS No.	EINECS No.	Purity	GHS Classification
2-Hydroxymethyl pyridine	586-98-1	209-592-7	> 98%	Acute Toxicity-Oral: Hazard category: Acute Tox.4, Skin corrosion / irritation: Hazard category: Skin Irrit. 2, Serious eye damage/ eye irritation: Hazard category: Eye Irrit. 2A, Specific target organ toxicity – single exposure: Hazard category: STOT Single Exp. 3

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.
- **Ingestion:** If swallowed call a poison centre if you feel unwell. Rinse mouth. Do NOT induce vomiting by use of emetics. Seek medical attention.

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

Acute effects:

- No information available.

Chronic effects:

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



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

- Note to physicians 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 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.

5.2. Special hazards arising from the substance or mixture.

- Toxic vapors may be released on thermal decomposition including nitrogen oxides, carbon monoxide & 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).
- Chemical is water-soluble. 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.

- Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate.
- Avoid breathing vapours and contact with skin and eyes.
- Shut off leak source if possible.
- Shut off all possible sources of ignition.
- Wipe up.
- Decontaminate all equipment.
- Use non-sparking tools.
- 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 vapours 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 dust, vapor or mist.



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- 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.

7.2. Conditions for safe storage, including any incompatibilities

- Store at ambient temperature in a dry and well-ventilated place away from heat, flame and sparks.
- Store away from incompatible materials.
- Keep securely closed when not in use.
- Hygroscopic. Light sensitive. May darken on storage

7.3. Specific end use(s)

- 2-(Hydroxymethyl) pyridine is used as an intermediate in pharmaceutical industry.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1.1 Control parameters:

Chemical name	STEL (ppm)	ACGIH TLV	OSHA PEL	NIOSH
2- (Hydroxymethyl) pyridine	Not established	Not established	Not established	Not established

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. The protective gloves to be used must comply with the specifications of EC directives 89/686/EEC and the resultant standard EN374.
- **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.

General Hygiene and general comments:

- Wash hands and face after working with substance.
- Immediately change contaminated clothing.
- Apply skin protective barrier cream.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Yellow
Odor	: Similar to pyridine



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Odor threshold	: Not available
pH	: 6-8
Melting point/ Freezing point	: -6 °C
Boiling point	: 112-113 ^o C @ 16.00 mm Hg 220 ^o C @ 760 mm Hg
Flash point	: 117 °C
Relative evaporation rate (butyl acetate=1)	: Not available
Flammability (solid, gas)	: Non Flammable
Explosive limits	: Not available
Explosive properties	: No
Oxidising properties	: No
Relative density	: 1.13g/cm ³
Relative vapour density at 20 °C	: Not available
Vapor pressure	: 0.026mm Hg 25 °C
Solubility	: Slightly soluble in water, 41g/l
Log Pow	: Not available
Auto-ignition temperature	: Not available
Partition coefficient : n- (Octanol / water)	: 0.11
Decomposition temperature	: No data available
Viscosity	: No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

- 2-(Hydroxymethyl) pyridine is yellow liquid like odor similar to pyridine. It is slightly soluble in water.

10.2. Chemical stability

- Stable under normal conditions of temperature and pressure, Hygroscopic material.

10.3. Possibility of hazardous reactions

- Hazardous Polymerization: Not reported.

10.4. Conditions to avoid

- Hygroscopic. Keep away from heat, sparks, flame, high temperature and incompatible chemicals, dust generation, u.v. light, strong oxidants

10.5. Incompatible materials

- Acids , Aldehydes , Oxidizing materials and Chloroformates

10.6. Hazardous decomposition products

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

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity : It is harmful if swallowed.

2-(Hydroxymethyl)pyridine.(586-98-1)		Source
LD50 Intravenous, Mouse	1 gm/kg	PHARAT - Pharmazie. (VEB Verlag Volk und Gesundheit, Neue Gruenstr. 18,Berlin DDR-1020, Ger. Dem. Rep.) V.1- 1946 11:242, 1956
LD50 Oral, Bird-Quail	1 gm/kg	AECTCV Archives of Environmental Contamination and Toxicology. (Springer-Verlag New York, Inc., Service Center, 44 Hartz Way, Secaucus, NJ 070944) V.1- 1973- Volume (issue)/page/year:12,355,1983



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LD50 Oral, Bird-Wild bird species	750mg/kg	AECTCV Archives of Environmental Contamination and Toxicology. (Springer-Verlag New York, Inc., Service Center, 44 Hartz Way, Secaucus, NJ 07094) V.1- 1973- Volume (issue)/page/year: 12,355,1983.
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Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: No data is available.
Germ cell mutagenicity	: No data is available
Carcinogenicity	: Not listed by NTP, IARC and OSHA. Not present on the EU CMR list. According to information presently available 2-(Hydroxymethyl)pyridine is not found to be carcinogenic.
Reproductive toxicity	: No data is available
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	: No data is available
Aspiration hazard	: No data is available.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Eco toxicity:

- Fathead minnow LC₅₀ (96 hr): 281.98 mg/L (Predicted Fathead minnow LC50 (96 hr) from Consensus method)

12.2. Persistence and degradability

- Not readily biodegradable.

12.3. Bioaccumulative potential

2-(Hydroxymethyl)pyridine.(586-98-1)	
Bioconcentration factor (BCF REACH)	3.2 (estimated)
Log Kow	0.06 (estimated)

Based on the Log Kow and Bio concentration factor value it is expected to have Non bio accumulative in fish and aquatic organisms and Negligible potential to bio accumulate.

12.4. Mobility in soil

2-(Hydroxymethyl)pyridine.(586-98-1)	
Log Koc	1.024 (predicted). Negligible Sorption.
Henry's Law Constant	6.74x10 ⁻¹¹ atm-m ³ /mole. Non-volatile from aqueous bodies
Log Kow	0.06. Negligible potential to bio accumulate

12.5. Results of PBT and vPvB assessment

- The substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII.

12.6. Other adverse effects

Additional information : It is predicted that 2-(Hydroxymethyl) pyridine is not expected to be classified as persistent in the environment. It has low ability to concentrate in the fatty tissue of fish and aquatic organisms. Since this is an estimated result, necessary guidelines should be followed before disposing off the material in to the environment

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste disposal recommendations : Burn in a chemical incinerator equipped with an afterburner and scrubber.



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Exert extra care in igniting, as this material is 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

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA
14.1. UN number		
Not dangerous for transportation	Not dangerous for transportation	Not dangerous for transportation
14.2. UN proper shipping name		
Not applicable.	Not applicable.	Not applicable.
Transport document description		
Not applicable.	Not applicable..	Not applicable.
14.3. Transport hazard class(es)		
Not applicable.	Not applicable.	Not applicable.
14.4. Packing group		
Not applicable.	Not applicable.	Not applicable.
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
No supplementary information available		

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture.

- European/International Regulations.

Classification (as per Regulation (EC) No 1272/2008):

- **Hazards Class and Category:** Acute Tox Oral Cat.4, Skin Irrit. Cat.2, Eye irrit. Cat 2, STOT Cat 3
- **Hazard Statements:** H302;H315,H319,H335

International Chemical Inventories

<u>Chemical Inventory Lists:</u>	<u>Status</u>
TSCA:	Not Listed
EINECS:	207-988-4
Canada(DSL/NDSL):	Not Listed
Japan:	Listed
Korea:	Not Listed
Australia:	Not Listed
China: IECSC	Not Listed
Philippines	Listed
New Zealand	Listed

US information

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

SARA 302/304 : 2-(Hydroxymethyl)pyridine is not listed

SARA 311/312 : See section 2 for more information

California Prop. 65: 2-(Hydroxymethyl)pyridine is not listed

CAA (Clean Air Act): 2-(Hydroxymethyl)pyridine is not listed

CWA (Clean Water Act): 2-(Hydroxymethyl)pyridine is not listed

EU Information

Water hazard class (WGK): WGK 1 (Low hazards to water)

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



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SECTION 16: OTHER INFORMATION

(a) Compilation information of safety data sheet

Date of compilation : December 13, 2011
Chemical : 2-(Hydroxymethyl)pyridine.
CAS # : 586-98-1
File Name : 0102Gj Ghs07 Div.03 sds 2-(Hydroxymethyl) pyridine
Revision Number : 07
Date of Issue of SDS : February 14, 2024
Revision Due Date : January, 2027
Supersedes date : January 02, 2024

(b) 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
- RTECS= Registry of Toxic Effects of Chemical Substances
- NTP=National Toxicology Programm
- 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/NDL= 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 .Authorisation and Restriction of Chemicals
- CLP = Classification, Labelling and Packaging
- LD / LC = Lethal Doses / Lethal Concentration
- GHS = Globally Harmonised System
- ADR = Accord europeen relative au transport international de marchandises
- 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

(c) Key Literature reference and sources for data

Biographical reference and data sources

- CLP REG (regulation) (EC) no. 1272/2008, last modification by regulation (EC) no. 790/2009
- DIR 67/548/EWG, last modification by DIR 2009/2/EC
- REG (EC) no. 1907/2006, last modification by REG (EC) Nr. 453/2009

(d) List of hazard statements

Hazards Statements	
	<ul style="list-style-type: none">• H335: May cause respiratory irritation.• H319: Causes serious eye irritation.• H315: Causes skin irritation.• H302: Harmful if swallowed.

SDS US (GHS HazCom 2012)



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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)
