



# Safety Data Sheet

As per Globally Harmonized System (GHS)

**Product Identification:** 3-Hydroxypiperidine

0751Gj Ghs05 Div.03 sds 3-Hydroxypiperidine

Date of issue: March 12, 2024

Date of Compilation : April 02, 2014

Date of Revision : March 12, 2024

Due Date of Revision : February, 2027

Revision Number : 05

Version Number : 0751Gj Ghs05 Div.03 sds 3-Hydroxypiperidine

Supersedes date : January 16, 2024

Supersedes version : 0751Ghs04 Div.03 sds 3-Hydroxypiperidine



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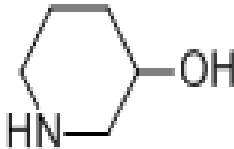
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## SECTION 1 : IDENTIFICATION

<b>PRODUCT NAME</b>	3-Hydroxypiperidine
<b>CAS RN</b>	6859-99-0
<b>EC#</b>	229-957-4
<b>SYNONYMS</b>	Piperidin-3-ol;3-Piperidinol
<b>SYSTEMATIC NAME</b>	3-Hydroxypiperidine
<b>MOLECULAR FORMULA</b>	C <sub>5</sub> H <sub>11</sub> NO
<b>STRUCTURAL FORMULA</b>	

### 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.  
PHONE NO: +91-120-4361000  
FAX NO : +91-120- 4234881 / 84 / 85 / 87 / 95 / 96  
Email: [support@jubl.com](mailto:support@jubl.com)  
Website: [www.jubilantingrevia.com](http://www.jubilantingrevia.com)

### Emergency telephone:

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



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## Product Uses

- It is used as advance intermediate for organic synthesis.

## SECTION 2:

## HAZARDS IDENTIFICATION

### GHS CLASSIFICATION

Skin corrosion: Category 1B

Serious eye Damage: Category 1

Specific Target Organ Toxicity: Category 3  
(After single exposure)



**Hazard Pictogram:** GHS 05, GHS 07

**Signal Word:** Danger

### HAZARD AND PRECAUTIONARY TEMENTS:

#### HAZARDS STATEMENTS

- H314: Causes severe skin burns and eye damage.
- H318: Causes serious eye damage.
- H335: May cause respiratory irritation.

#### PRECAUTIONARY STATEMENTS

##### Prevention

- P260: Do not breathe dust/fume/gas/mist/vapours/spray.
- P264: Wash hands thoroughly after handling.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P261: Avoid breathing fume/mist/vapors/spray.
- P271: Use only outdoors or in a well-ventilated area.

##### Response

- P305+P351+P338IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310: Immediately call a POISON CENTER or doctor/physician.
- P301+P330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353: IF ON SKIN (OR HAIR): Remove/Take off immediately all contaminated clothing .Rinse skin with water/shower.
- P363: Wash contaminated clothing before reuse.
- P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.



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- P321: Specific treatment reference to supplemental first aid instruction, if immediate specific measures are required.
- P312: Call a POISON CENTER or doctor/physician.

## Storage

- P 405: Store locked up.
- P403+233: Store in a well ventilated place. Keep container tightly closed.

## Disposal

- P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Sr.No.	Chemical	CAS #	EC#	Purity
1	3-Hydroxypiperidine	6859-99-0	229-957-4	≥ 98 %

## SECTION 4: FIRST AID MEASURES

### Key symptoms

#### Acute effects:

- 3-Hydroxypiperidine causes severe skin burns and eye damage. It may cause respiratory irritation. Pain and redness of eyes is common acute effects. Eye contact can result in corneal damage or blindness. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Corrosive materials may cause serious injury if ingested. Skin contact may produce burns.

#### Chronic effects

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

#### First Aid:

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

## SECTION 5 : FIRE-FIGHTING MEASURES

**Flash Point:** > 100 °C

**Flammability:** Non Flammable



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## Extinguishing media

- *Appropriate extinguishing media:* Dry chemical powder, carbon dioxide, and alcohol resistant foam. Water may also be used. Water spray 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.

## Special Protective Equipment and Precautions for Fire Fighter.

- Fire fighters must wear Self Contained Breathing Apparatus (SCBA) and full protective clothing. The chemical is corrosive on contact.
- Report any run-off of firewaters contaminated with this chemical as per local and federal procedures applicable.

## Unusual fire and explosion hazard:

- Toxic vapors may be released on thermal decomposition including carbon monoxide and carbon dioxide oxides of nitrogens and irritating and toxic fumes.
- High vapor concentration may result in an explosion hazard.
- Vapors are heavier than air and may accumulate in low-lying areas like basements and drains.

## SECTION 6 : ACCIDENTAL RELEASE MEASURES

### Minor Spills

- Clean up all spills immediately following relevant Standard Operating Procedures.
- Avoid breathing vapors and contact with skin and eyes.
- Shut off leak source if possible.
- Shut off all possible sources of ignition.
- Wear protective clothing, boots, impervious gloves and safety glasses. The chemical is corrosive.
- Carefully, contain and neutralize with slaked lime or absorbent material (eg sand, kieselgur, acid binder, universal binder, and sawdust).
- Wipe up.
- Decontaminate all equipment.

### Major Spill

- Alert Emergency Responders and tell them location and nature of hazard.
- Shut off all possible sources of ignition and increase ventilation.
- Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate. The material is corrosive.
- Clear area of personnel and move upwind.
- Stop leaks if possible.
- 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.
- Wash spill area with water.



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- Clean up all tools and equipment.
- Inform authorities in event of contamination of any public sewers, drains or water bodies.

## SECTION 7: HANDLING AND STORAGE

### Handling

- Do not breathe vapour or mist.
- Wear protective gloves/clothing and eye/face protection.
- Wash thoroughly after handling.
- 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.
- 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.

### Storage

- Store in a cool, well ventilated place. Recommended storage temperature is 2-8 °C
- Store away from incompatible materials.
- Keep only in original container.
- Keep securely closed when not in use.

## SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

- **Exposure Limits Values**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
3-Hydroxypiperidine	Not available	Not Listed	Not available

### Exposure Controls

- **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

### Exposure Limits (International):

- Not available.

### Exposure controls

#### 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. Use only in a chemical fume hood.



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## 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 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

- Information on basic physical and chemical properties.

Sr.No.	Parameter	Typical value
1.	Appearance	White to light yellow crystalline powder and lumps
2.	Odor	Characteristic
3.	Odor threshold	Not available
4.	pH	11.5 to 11.7 (16g/l water @20 °C)
5.	Melting point	51-61 °C
6.	Boiling point	67 – 69 °C at 2 mmHg
7.	Flash point	>100 °C
8.	Evaporation rate (n-BuAc=1)	Not available
9.	Explosive limits	Not available
10.	Vapor pressure	0.134 Torr at Temp: 25 °C
11.	Relative Vapor density (air=1)	Not available
12.	Relative density	Not available
13.	Solubility	Soluble in water and IPA
14.	Log Kow (octanol/water)	-0.3
15.	Auto-ignition temperature	Not available



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16.	Decomposition temperature	Not available
17.	Viscosity	Not available
18.	Molecular Weight	101.15
19.	Flammability	Non Flammable
20.	Oxidizer	Not available
21.	Corrosive material	Yes
22.	Explosive Material	No

## SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable at recommended storage condition. Storage temperature is 2-8 °C.
- **Conditions to avoid:** Keep away from heat, sparks and flame. Reactive with metals, oxidizing materials and bases (including amines). Protect from moisture and air.
- **Incompatible chemicals:** Strong Oxidizing agents. Keep away from moisture and air.
- **Hazardous decomposition:** Toxic vapors may be released on thermal decomposition including carbon monoxide and carbon dioxide oxides of nitrogens and irritating and toxic fumes.
- **Hazardous Polymerization:** Not reported.

## SECTION 11: TOXICOLOGICAL INFORMATION

### a) Acute Toxicity:

- 3-Hydroxypiperidine causes severe skin burns and eye damage. It may cause respiratory irritation. Pain and redness of eyes is common acute effects. Eye contact can result in corneal damage or blindness. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Corrosive materials may cause serious injury if ingested. Skin contact may produce burns.
- Oral rat LD50: 2139.71 mg/kg (Predicted Oral rat LD50 from Consensus method)

RTECS#: Not listed.

### b) Skin corrosion/irritation

- Causes severe skin burns.

### c) Serious eye damage/irritation

- Causes serious eye damage.

### d) Respiratory or skin sensitization

- No data available

### e) Germ cell Mutagenicity

- No data is available.

### f) Carcinogenicity

- 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.

### g) Reproductive toxicity





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- 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.

## SECTION 12: ECOLOGICAL INFORMATION

### (a) Toxicity (Ecotoxicity)

- Fish=91mg/l
- 3-Hydroxypiperidine is not chronically toxic to fish.

### (b) Persistence and Degradability

- 3-Hydroxypiperidine is estimated not to be persistent in the environment.

### (c) Bioaccumulation:

- BCF = 3.2
- Log Kow = -0.3 Low potential to bio accumulate.
- 3-Hydroxypiperidine is not expected to bioaccumulate in the food chain because it does not exceed the BCF criteria.

### (d) Mobility in soil

- Log Koc= 4.2.
- Henry's Law Constant: 0.00000000063 atm/m<sup>3</sup> mole at 25 degrees.
- Log Kow = -0.3

### (e) Environmental Fate:

Based on the environmental modeling, this material has a low potential to get moderate absorbed in the organic matter of soil and is slightly volatile from water bodies and based on the Log Kow and Bio concentration factor value it is expected to have low potential to concentrate in fatty tissue of fish and aquatic organisms and is estimated not to be persistent in the environment. Since this is an estimated result it is recommended that the material should not be disposed into the environment. The material should never be disposed into the sewage.

## SECTION 13: DISPOSAL CONSIDERATIONS

### Waste treatment methods

- 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



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- This substance is considered to be Hazardous for transport by Air/Rail/Road and Sea and thus regulated by IATA/ICAO/ARD/RID/IMO/IMDG.

S.No	Agency	UN Number	Proper Shipping name	Hazard Class	Packing Group
Land Transport	ADR/RIC	UN 3263	Corrosive Solid, Basic, Organic, N.O.S. (3-Hydroxypiperidine)	8	III
Maritime Transport	IMDG	UN 3263	Corrosive Solid, Basic, Organic, N.O.S. (3-Hydroxypiperidine)	8	III
Air Transport	IATA	UN 3263	Corrosive Solid, Basic, Organic, N.O.S. (3-Hydroxypiperidine)	8	III
<b>Hazard Label</b>		<b>Hazard Class 8 (Corrosive)</b>			

### Environmental hazards

- Marine pollutant: No.

## SECTION 15: REGULATORY INFORMATION

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

- Hazards Class and Category:** Skin Corr Cat.1B, Eye Dam Cat. 1, STOT SE Cat 3
- Hazard Statements:** H314; H318; H335

Chemical Inventory Lists:	Status
<b>TSCA:</b>	Not Listed
<b>EINECS:</b>	229-957-4
<b>Canada(DSL/NDSL):</b>	Not Listed
<b>Japan:</b>	Not Listed
<b>Korea:</b>	Not Listed
<b>Australia:</b>	Not Listed
<b>China: IECSC</b>	Not Listed
<b>Taiwan:</b>	Listed



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<b>New Zealand :</b>	Listed
<b>Philippines:</b>	Listed

## US information

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):**

3-Hydroxypiperidine not listed

**SARA 302/304 :** 3-Hydroxypiperidine not listed

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

**California Prop. 65:** 3-Hydroxypiperidine not listed

**CAA (Clean Air Act):** 3-Hydroxypiperidine not listed

**CWA (Clean Water Act):** 3-Hydroxypiperidine not listed

## EU Information

**Water hazard class (WGK) 3**

**Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006:** 3-Hydroxypiperidine not listed

## **SECTION 16: OTHER INFORMATION**

**Compilation information of safety data sheet**

**Chemical:** 3-Hydroxypiperidine

**CAS #:** 6859-99-0

**File Name:** 0715Gj Ghs05 Div 03 sds 3-Hydroxypiperidine

**Date:** March 12, 2024

**Revision:** 05

**Revision Due Date:** February, 2027

**(a) 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 Programm.
- IARC= International Agency for Research on Cancer.
- EPA=Environmental Protection Agency.



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- 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 .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.

## **(b)Key Literature references 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

### **Company's Declaration:**

Information contained in this SDS is believed to be correct but no representation; guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. This SDS shall be used as a guide only. Jubilant Ingrevia Limited makes no warranties expressed or implied of the adequacy of this document for any particular purpose.

(End of Safety Data Sheet)

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