



Piperidine-2-ethanol

Safety Data Sheet

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

Date of compilation : February 26, 2013

Chemical : Piperidine-2-ethanol

File Name : 0713Gj Ghs07 Div.3 sds Piperidine-2-ethanol

Revision Number : 07

Date Issue : March 29, 2024

Revision Due Date : February, 2027

Supersedes date : January 10, 2024

Supersedes version : 0713Gj Ghs06 Div.3 sds Piperidine-2-ethanol

Piperidine-2-ethanol

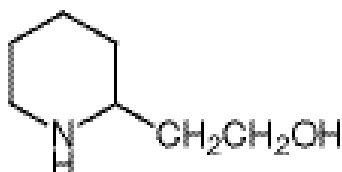
Safety Data Sheet

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

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

1.1. Identification

PRODUCT NAME	:	Piperidine-2-ethanol
CAS RN	:	1484-84-0
EC#	:	216-059-2
SYNONYMS	:	2-(2-Piperidinyl) ethanol
MOLECULAR FORMULA	:	C ₇ H ₁₅ NO
STRUCTURAL FORMULA	:	



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

1.2.1. Relevant identified uses

Key raw material/ intermediate in Agrochemical & Pharma products. Icaridin, Tiquizium bromide, Mesoridazine.

Uses advised against: None

1.3. Details of the supplier of the safety data sheet

Jubilant Ingrevia Limited

FACTORY 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@jubi.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 CLASSIFICATION

Acute toxicity Oral: Category 4

Skin corrosion / irritant: Category 1B

2.2. Label Elements

Hazard Pictogram: Hazard Pictogram: GHS 05, GHS 07

Signal Word: Danger!

HAZARD AND PRECAUTIONARY STATEMENTS:

HAZARD STATEMENTS

- H302: Harmful if swallowed.
- H314: Causes severe skin burns and eye damage.

PRECAUTIONARY STATEMENTS

- P260: Do not breathe dust/fume/gas/mist/vapors/spray
- P264: Wash hands thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P330: Rinse mouth.
- 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.





Piperidine-2-ethanol

Safety Data Sheet

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

- P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P310: Immediately call a POISON CENTER or doctor/physician.
- P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
- P405: Store locked up.
- P501: Dispose of contents/container to local/regional/national/international regulations.

SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical	CAS #	EC Number	% Composition	GHS Classification
Piperidine-2-ethanol	1484-84-0	216-059-2	> 98.0 %	Acute toxicity Oral: Category 4 Skin corrosion / irritant: Category 1B

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

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

- Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

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

- Treat symptomatically

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

- Suitable extinguishing media: In case of fire, use water spray (fog), foam, dry chemical or CO₂.
- Unsuitable extinguishing media: None known.

5.2. Special hazards arising from the substance or mixture

- Hazards from the substance or mixture: No specific fire or explosion hazard.
- Hazardous combustion products: Decomposition products may include the following materials: carbon oxides, nitrogen oxides

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) and full protective clothing. The chemical is harmful in contact with skin.
- Report any run-off of fire waters contaminated with this chemical as per local and federal procedures applicable

5.4. Further information

- No data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

- Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.
- Avoid dust formation. Avoid breathing vapors, mist or gas.
- Avoid contact with skin and eyes.
- Wear protective clothing, boots, impervious gloves and safety glasses.
- Alert Emergency Responders and tell them location and nature of hazard.



Piperidine-2-ethanol

Safety Data Sheet

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

6.2. Environmental precautions

- Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release.
- Prevent, by any means available, spillage from entering drains or water and watercourses.
- Collect recoverable product into labeled containers for recycling, recovery or disposal.

6.3. Methods and materials for containment and cleaning up

- 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.
- Clean up all tools and equipment.
- Dispose of via a licensed waste disposal contractor.
- Inform authorities in event of contamination of any public sewers, drains or water bodies.

6.4. Reference to other sections

- For disposal see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

- Handle in accordance with good industrial hygiene and safety procedures. Avoid Prolonged or repeated exposure. Take precautionary measures against electrostatic discharge.
- Material should be handled in a laboratory hood whenever against fire and explosion possible.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke
- If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator.
- Keep in the original container or an approved alternative made from a compatible material.
- Kept tightly closed when not in use.

7.2. Conditions for safe storage, including any incompatibilities

- Store at ambient temperature in a well ventilated place.
- Store away from incompatible materials.
- Keep only in original container protected from direct sunlight.
- Keep securely closed when not in use.
- Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers.

7.3. Specific end use(s)

- Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

- **Exposure Limits Values**

Chemical name	STEL (ppm)	NIOSH	ACGIH	OSHA
Piperidine-2-ethanol	Not established	Not established	Not established	Not established

8.2. 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.

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 directive 89/686/EEC and the resultant standard EN374, for example KCL 740 Dermatril® (full contact), 740 Dermatril® (splash contact).
- **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.



Piperidine-2-ethanol

Safety Data Sheet

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

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

9.1 Information on basic physical and chemical properties

Sr.No.	Parameter	Typical value
1	Appearance	Pale yellow to light brown clear liquid (above 38°C) or off white solid (below 30°C)
2	Odor	Nearly Odorless
3	Odour Threshold	Not available
4	pH	10 to 12
5	Melting point	38-40 deg C
6	Boiling point	234 deg C @ 760mmHg
7	Flash point	112.8°C-Closed cup
8	Evaporation rate (n-BuAc=1)	Not available
9	Explosive limits	Not available
10	Vapor pressure	0.75 Pa 20°C 1.25 Pa 25 °C 13.04 Pa 50 °C
11	Solubility	Soluble in organic solvents, Very soluble in water
12	Log Kow (octanol/water)	0.263
13	Auto-ignition temperature	Not available
14	Relative density	1,010 g/cm3
15	Viscosity	Not available
16	Molecular Weight	129.2 gm/mol
17	PKa (@25°C)	Not available
18	Log Koc	Not available
19	Flammable material	Non flammable
21	Corrosive material	Corrosive
22	Explosive material	Not available

9.2 Other safety information

- **Surface tension:** 60.75 mN/m at 20 deg C

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

- No data available

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

- **Hazardous Polymerization:** Not reported.

10.4 Conditions to avoid

- Exposure to moisture and heat.

10.5 Incompatible materials

- Strong oxidizing agents, Strong acids, Strong bases.

10.6 Hazardous decomposition products

- Other decomposition products Thermal decomposition may produce carbon monoxide, carbon dioxides, oxides of nitrogen

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

RTECS: Not Available



Piperidine-2-ethanol

Safety Data Sheet

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

Acute toxicity:

Test Type	Species Observed	Reported Dose
Acute oral LD50	Rat	940 mg/kg
Acute dermal LD50	Rabbit	> 2 000 mg/kg

Skin corrosion/irritation	:	Causes skin burns
Serious eye damage/eye irritation	:	Causes serious eye damage
Respiratory or skin sensitization	:	No data available
Germ cell mutagenicity	:	Not data available
Carcinogenicity	:	Not data available
Specific target organ toxicity - single exposure	:	Not data available
Specific target organ toxicity - repeated exposure	:	Not data available
Aspiration hazard	:	Not data available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

- Fish LC50 (96-hr) Not available
- Daphnia Magna EC50 (48-hr) >100mg/l
- **Short-term toxicity to aquatic invertebrates**-In the limit concentration 100 mg/L of the TS no effects on Daphnia magna were observed.

12.2 Persistence and degradability

- Piperidine-2-ethanol (2-Piperidineethanol) is soluble in water and is readily biodegradable.

12.3 Bio accumulative potential

Piperidine-2-ethanol (1484-84-0)	
Bio concentration factor	3.162 L/Kg
Log Kow	0.63 Low potential to bio accumulate

- Based on the Log Kow and Bio concentration factor value it is expected to have no potential to concentrate in fatty tissue of fish and aquatic organisms, Bioaccumulation is unlikely..

12.4 Mobility in soil

Piperidine-2-ethanol (1484-84-0)	
Log koc	0.819 (estimated). Negligible sorption
Henry's Law constant	1.11E-009 atm/m ³ mole at 25 degrees. It is non-volatile from aqueous bodies.
Log Kow	0.63. No potential to bio accumulate.

- 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

12.5 Other adverse effects

- **Environment Fate**
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

13.1. 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.

Piperidine-2-ethanol

Safety Data Sheet

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

SECTION 14: TRANSPORT INFORMATION

ADR/ RID/ DOT	IMDG	IATA
14.1. UN number		
UN 3263	UN 3263	UN 3263
14.2. UN proper shipping name		
Corrosive solid, basic, organic, n.o.s	CORROSIVE SOLID, BASIC, ORGANIC,N.O.S	Corrosive solid, basic, organic, n.o.s
14.3. Transport hazard class(es)		
8	8	8
14.4. Packing group		
II	II	II
		
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		

14.6 Special precautions for user

- No data available

SECTION 15: REGULATORY INFORMATION

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

- Hazards Class and Category: Acute toxicity Oral-category 4, Skin corrosion category 1B
- Hazard Statements: H302, H314

Status in Global Inventories

<u>Chemical Inventory Lists:</u>	<u>Status</u>
TSCA:	Listed (Active)
EC/ List No.	Listed
Canada(DSL/NDL):	Listed (DSL)
Japan (ENCS):	Listed
Korea:	Not Listed
Australia:	Listed
China: IECSC	Listed



Piperidine-2-ethanol

Safety Data Sheet

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

Taiwan	Listed
Philippines	Not Listed
New Zealand	Not Listed

US information

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

Piperidine-2-ethanol is not listed

SARA 302/304 : Piperidine-2-ethanol is not listed

SARA 311/312 : See section 2 for more information

California Prop. 65: Piperidine-2-ethanol is not listed

CAA (Clean Air Act): Piperidine-2-ethanol is not listed

CWA (Clean Water Act): Piperidine-2-ethanol 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: Piperidine-2-ethanol is not listed

SECTION 16: OTHER INFORMATION

a) Compilation information of safety data sheet

Date of compilation : February 26, 2013
Chemical : 2-Piperidine ethanol
CAS # : 1484-84-0
File Name : 0713Gj Ghs07 Div.3 sds Piperidine-2-ethanol
Revision Number : 07
Date Issue : March 29, 2024
Revision Due Date : February, 2027
Supersedes date : January 10, 2024
Supersedes version : 0713Gj Ghs06 Div.3 sds Piperidine-2-ethanol

b) A key or legend to aberrations and acronyms used in the safety data sheet

- 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 Program.
- IARC= International Agency for Research on Cancer.
- CLP=Classification, Labeling and Packaging.
- LD / LC = Lethal Doses / Lethal Concentration.
- GHS = Globally Harmonized System.
- ADR = Accord European relative au transport international de marchandises.
- US DOT = United States Department of Transportation.
- IMDG-Code = International Maritime Code for Dangerous Goods.
- ICAO = International Civil Aviation Organization.
- IATA/DGR= International Air Transport Association/Dangerous Goods Regulation

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)