



# Safety Data Sheet

As per Globally Harmonized System (GHS)

**Product Identification:** 4-Bromo-2-methylpyridine      0138Gj Ghs08 Div.3 sds 4-Bromo-2-methylpyridine

Date of issue: March 15, 2024

Date of Compilation : November 08, 2013  
Date of Revision : March 15, 2024  
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Revision Number : 08  
Version Number : 0138Gj Ghs08 Div.3 sds 4-Bromo-2-methylpyridine  
Supersedes date : January 02, 2024  
Supersedes version : 0138Gj Ghs07 Div.3 sds 4-Bromo-2-methylpyridine

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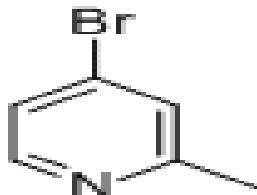
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## SECTION 1.: IDENTIFICATION

**PRODUCT NAME** 4-Bromo-2-methylpyridine  
**CAS RN** 22282-99-1  
**EC#** 624-896-3  
**SYNONYM:** 2-Methyl-4-bromopyridine; 4-Bromo-2-methylpyridine; 4-Bromo-methylpyridine; 4-Bromo-2-picoline  
**SYSTEMATIC NAME** 4-Bromo-2-methylpyridine  
**MOLECULAR FORMULA** C<sub>6</sub>H<sub>6</sub>BrN

**STRUCTURAL FORMULA**



**FACTORY & REGISTERED OFFICE:** Jubilant Ingrevia Limited  
Bhartiagram, Gajraula  
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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

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

## Product Uses:

- 4-Bromo-2-methylpyridine is used as an intermediate in pharmaceutical industries and for research and development.

## SECTION 2: HAZARDS IDENTIFICATION

### GHS-US classification

Flammable Liquids: Category 4

Acute Toxicity (Oral): Category 4

Skin corrosion / irritant: Category 2

Serious eye damage/eye irritation: Category 1

Specific target organ toxicity: Category 3

(After single exposure)



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

**Signal Word:** Danger!

## HAZARD AND PRECAUTIONARY STATEMENTS:

### HAZARD STATEMENTS

- H227: Combustible liquid.
- H302: Harmful if swallowed.
- H315: Causes skin irritation.
- H318: Causes serious eye damage.
- H335: May cause respiratory irritation.

### PRECAUTIONARY STATEMENTS

- P210: Keep away from flames and hot surfaces.-No smoking.
- P264: Wash hands thoroughly after handling.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
- P270: Do not eat, drink or smoke when using this product.
- P271: Use only outdoors or in a well-ventilated area.
- P370+P378: In case of fire use water for extinction.
- P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- 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.



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- 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

Sr.No.	Chemical	CAS #	EC#	Purity
1.	4-Bromo-2-methylpyridine	22282-99-1	624-896-3	≥99 %

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

**General advice:** Consult a physician if necessary.

**Inhalation:** Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

**Skin Contact:** Wash skin with soap and water.

**Eye contact:** Wash with plenty of water.

**Ingestion:** Never give anything by mouth to an unconscious person. Clean mouth with water.

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

**Acute effects:**

- No information available.

**Chronic effects:**

- Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

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

**Note to physicians:** Treat symptomatically.

## SECTION 5 : FIRE-FIGHTING MEASURES

**Flash Point:** 78.9 °C-closed cup

**Flammability:** Combustible Liquid

**Extinguishing media:**

- *Appropriate extinguishing media:* Dry chemical powder, carbon dioxide, and alcohol resistant foam. Do not permit water to get inside containers. Water can be effective in cooling down the fire-exposed



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Containers and Knocking down the vapours. Water jets may be used to flush spills away and dilute the same to nonflammable 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:

- 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.
- Do not get water inside the containers.
- Fire fighters must wear Self Contained Breathing Apparatus (SCBA) and full protective clothing.
- Report any run-off of fire waters 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 nitrogen oxides, carbon monoxide, Carbon di-oxide, halogenated compounds e.g HBr gas and irritating and toxic fumes is produced during combustion.
- High vapor concentration may result in an explosion hazard.
- Vapors are heavier than air. May travel considerable distance from source and flashback.

## 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.
- 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.
- 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.



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- Spread area with lime or absorbent material, and leave for at least 1 hour before washing.
- 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 vapor or mist.
- Wear protective gloves/clothing and eye/face protection.
- Keep away from flames and hot surfaces.
- Take measures to prevent the build up of electrostatic charge.
- Use explosion-proof equipment.
- Wash hands and face thoroughly after handling.
- Use a closed system if possible.
- Use a ventilation, local exhaust if vapour or aerosol will be generated.
- 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.

### Storage

- Store at ambient temperature in a well-ventilated and dry place.
- Keep container tightly closed.
- Store away from incompatible materials.
- Handle and store under nitrogen as material is air sensitive.

## SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

### Exposure Limits Values

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
4-Bromo-2-methylpyridine	Not available	Not available	Not available

### Exposure Limits (International):

- Not available.

### Exposure controls

### Appropriate Engineering Controls:

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- 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.
- **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	Pale orange oily liquid
2	Odor	Characteristic odour
3	Odor Threshold	Not available
4	Melting point	26-27 °C
5	Boiling point	195°C (pressure 760 mmHg)
6	Flash point	78.9 °C
7	Evaporation rate (n-BuAc=1)	Not available
8	Explosive limits	Not available
9	Vapor pressure	0.447 mm Hg at 25 °C
10	Vapor density (air=1) at 20°C	Not available

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11	Relative density	1,45 g/cm <sup>3</sup> at 25 °C
12	Solubility	Sparingly soluble - 732.4 mg/L
13	pH	5.3-5.6 (16g/l water @20 °C)
14	Log Kow (octanol/water)	2.287
15	Auto-ignition temperature	Not available
16	Decomposition temperature	Not available
17	Viscosity	Not available
18	Molecular Weight	172.02
21	Flammability	Combustible material
22	Oxidizer	No
23	Corrosive material	Not available
24	Explosive material	No

## SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable under specified condition of temperature and pressure.
- **Conditions to avoid:** Keep away from heat, sparks, flames, moisture and incompatible chemicals. Avoid excessive heat and light.
- **Incompatible chemicals:** Strong oxidizing agents and reducing agents.
- **Hazardous decomposition products:** Toxic vapors may be released on thermal decomposition including nitrogen oxides, carbon monoxide, Carbon di-oxide, halogenated compounds e.g HBr gas and irritating and toxic fumes is produced during combustion.
- **Hazardous Polymerization:** Not reported.

## SECTION 11: TOXICOLOGICAL INFORMATION

### a) Acute toxicity

- 4-Bromo-2-methylpyridine causes skin, and serious eyes irritation. Direct contact may cause irritation, redness, tearing and blurred vision. It may cause irritation to the respiratory tract. May cause occasional nausea, vomiting and diarrhea. Exposure to chemicals with a strong odor often results in such non-specific symptoms as headache, dizziness, weakness, and nausea.

**RTECS#:** Not listed.

Oral rat LD<sub>50</sub>- 745.17 mg/kg (Predicted Oral rat LD50 from Consensus method)

### b) Skin corrosion/irritation

- Causes skin irritation.

### c) Serious eye damage/irritation

- Causes serious eye irritation.

### d) Respiratory or skin sensitization





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- No data is available.
- e) ***Germ cell Mutagenicity***
  - No data is available.
- f) ***Carcinogenicity***
  - Not available.
- 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.

## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity

#### Ecotoxicity:

- Fathead minnow LC<sub>50</sub> (96 hr): 106.5 mg/L (Predicted Fathead minnow LC<sub>50</sub> (96 hr) from Consensus method)

#### Persistence and degradability:

- It is expected to be persistent in aerobic and anaerobic condition.

#### Bio accumulative potential

- BCF = 14 (Estimated)
- Log Kow = 2.287 (Estimated) Low potential to bio accumulate.

#### Mobility in soil

- Koc= 184.6
- Log Koc=2.266
- Henry's Law Constant: 3.10E-006atm-m<sup>3</sup>/mole (Estimated)
- Log Kow = 2,287.

#### Other adverse effects.

- **Environment Fate:**
- Based on the environmental modeling, this material has a low potential to get absorbed in the organic matter of soil and is non-volatile from water bodies and is expected to be persistent in aerobic and anaerobic condition.. 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



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- Burn in a chemical incinerator equipped with an afterburner and scrubber.
- Exert extra care in igniting, as this material is combustible liquid.
- 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 non hazardous for transport by Air/Rail/Road and Sea and thus not regulated by IATA/ICAO/US DOT/TDG/IMO/IMDG.

### Environmental hazards:

- Marine pollutant: No.

## SECTION 15: REGULATORY INFORMATION

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

- **Hazards Class and Category:** Acute tox Cat 4; Skin Irrit Cat. 2 ; Eye Irrit Cat 1 ; STOT SE Cat. 3
- **Hazard Statements:** H302; H315;H318; H335

Chemical Inventory Lists:	Status
<b>TSCA:</b>	Not Listed
<b>EINECS:</b>	Not Listed
<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

### US information

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):** 4-Bromo-2-methylpyridine is not listed

**SARA 302/304 :** 4-Bromo-2-methylpyridine is not listed

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

**California Prop. 65:** 4-Bromo-2-methylpyridine is not listed

**CAA (Clean Air Act):** 4-Bromo-2-methylpyridine is not listed

**CWA (Clean Water Act):** 4-Bromo-2-methylpyridine 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:** 4-Bromo-2-methylpyridine is not listed



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## SECTION 16: OTHER INFORMATION

### Compilation information of safety data sheet

**Chemical:** 4-Bromo-2-methylpyridine

**CAS #:** 22282-99-1

**File Name:** 0138Gj Ghs08 Div.3 sds 4-Bromo-2-methylpyridine

**Revision Number:** 08

**Date of revision:** March 15, 2024

**Revision Due Date:** February, 2027

### (a) 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.
- 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.
- 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.
- 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, Labeling and Packaging.
- LD / LC = Lethal Doses / Lethal Concentration.
- GHS = Globally Harmonized System.



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- 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 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)