

Safety Data Sheet

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

Date of Compilation : June 30, 2022

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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. Product identifier

Product identification : 3-Bromopyridine
CAS RN : 626-55-1
EC# : 210-952-0
Trade name : 3-Bromopyridine
Systematic Name : 3-Bromopyridine

Synonyms : 3-Bromo-pyridine; pyridine, 3-bromo-

 $Molecular\ Formula \qquad \qquad :\ C_5H_4NBr$

Structural Formula



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

1.2.1. Relevant identified uses

3-Bromopyridine is used as an intermediate in the synthesis of Active Pharmaceutical Ingredients especially Abiraterone acetate and Zimelidine.

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, +91-5924-267438

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 - 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-US classification

Flammable Liquid: Category 3

Acute toxicity-oral: Category 4

Skin Corrosion/Irritation: Category 2

Serious Eye Damage/Eye Irritation: Category 2

Specific target organ toxicity (single exposure) Category 3

H226

Flammable liquid and vapor

Hamful if swallowed

Causes skin irritation

Causes serious eye irritation

May cause respiratory irritation.

2.2. Label Elements

Label elements according to regulation (EC) 1272/2008





Pictograms: GHS02. GHS07 GHS 02-Flammable GHS07-Exclamation

Signal word: Warning!

HAZARD AND PRECAUTIONARY STATEMENTS:

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HAZARD STATEMENTS

- H226: Flammable liquid and vapor
- H302: Harmful if swallowed
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H335: May cause respiratory irritation.

PRECAUTIONARY STATEMENTS

- P261: Avoid breathing dust/fume/gas/mist/vapors/spray
- P271: Use only outdoors or in well ventilated area.
- P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233: Keep container tightly closed.
- P240: Ground/bond container and receiving equipment.
- P241: Use explosion-proof electrical/ventilating/lighting equipment.
- P242: Use only non-sparking tools.
- P243: Take precautionary measures against static discharge.
- P264: Wash hands, eyes and face thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P280: Wear protective gloves/clothing and eye/face protection.
- P304+P340: 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
- P301+P312: IF SWALLOWED: Call a poison center or doctor/physician if you feel unwell.
- P330: Rinse mouth.
- P302 + P352: If on Skin: Wash with plenty of soap and water.
- P321: Specific treatment (see ... on this label)
- P332 + P313: If skin irritation occurs: Get medical advice/attention.
- P362: Take off contaminated clothing and wash 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 rising.
- P337 + P313: If eye irritation persists: Get medical advice/attention.
- P303 + P361 + P353: If on Skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P370+378: In case of fire: Use ... for extinction
- P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
- P403+P235: Store in a well-ventilated place. Keep cool.
- 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
3-Bromopyridine	626-55-1	210-952-0	100 %

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Key symptoms

Acute effects

4.1. Description of first aid measures.

4.1.1 Route of exposure: Inhalation, skin, eye and ingestion.

4.1.2 Advice

- Rinse eyes cautiously with water for at least 15 minutes. Remove contact lenses if easy to do so. Continue rinsing. Seek medical attention.
- Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Call a POISON CENTER or doctor/physician if you feel unwell.

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

Acute effects:

3-Bromopyridine is irritating to skin and eyes. It may cause irritation to respiratory system and gastrointestinal tract.



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A skin, eye, and respiratory tract irritant

Chronic effects:

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

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

- 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. 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 center if you feel unwell. Rinse mouth. Do NOT induce vomiting by use of emetics. Seek medical attention.

SECTION 5: FIRE-FIGHTING MEASURE

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 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 nonflammable 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 carbon monoxide and oxides of nitrogen, carbon dioxide & Hydrogen bromide, irritating and toxic fumes.
- Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.

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 fire waters 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).
- Alert Emergency Responders and tell them location and nature of hazard.
- Shut off all possible sources of ignition and increase ventilation.
- Avoid breathing vapors and contact with skin and eyes.

6.2. Environmental precautions

- Clean up all spills immediately.
- Prevent spillage from entering drains or water and watercourses.
- Inform authorities in event of contamination of any public sewers, drains or water bodies.
- Collect recoverable product into labeled containers for recycling, recovery or disposal.
- 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.



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- 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.
- Keep away from heat, flame and sparks.
- Store in a flame proof area.
- Store away from incompatible materials.
- Keep securely closed when not in use.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits Values

Chemical name	STEL (ppm)	NIOSH	ACGIH	OSHA
3-Bromo Pyridine	None available	None available	None available	None available

8.1.2Exposure 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.

8.3. General Hygiene and general comments

- Wash hands and face after working with substance.
- Immediately change contaminated clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties.

Sr.No.	Parameter	Typical value
1.	Appearance	Clear Colorless to yellow liquid.
2.	Odor	Pungent odor
3.	Odor Threshold	Not available
4.	рН	Not Available
5.	Melting point/Freezing point	-27.3 °C



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6.	Boiling Point	173.42 ° C
7.	Flash point	52°C (Closed cup)
8.	Evaporation rate (n-BuAc=1)	Not available
9.	Flammability	Flammable
10.	Upper/lower flammability or Explosive limits	Not available
11.	Vapor pressure	Not available
12.	Vapor density (air=1)	Not available
13.	Relative density	1.64 g/mL at 25 °C
14.	Solubility	83.9 mg/L at 25°C
15.	Partition coefficient : n-(Octonol / water)	1.694
16.	Auto-ignition temperature	Not available
17.	Decomposition temperature	Not available
18.	Viscosity	Not available
19.	Explosive property	No
20.	Oxidizing property	No

SECTION 10: STABILITY AND REACTIVITY

- Reactivity: No data available.
- Chemical stability: Stable under normal conditions of temperature and pressure.
- Possibility of hazardous reactions: Not known
- Hazardous Polymerization: Will not occur.
- Conditions to avoid: Keep away from High temperature, mechanical shock, sparks, incompatible materials, ignition sources, excess heat, and moisture. Store in tightly closed containers at ambient temperature, well ventilated area away from heat and flame.
- Incompatible materials: Strong oxidizing agents, Strong acids and bases.
- Hazardous decomposition products: Thermal decomposition may produce carbon monoxide and oxides of nitrogen, carbon dioxide & Hydrogen bromide, irritating and toxic fumes.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

. 3-Bromopyridine is harmful if swallowed, irritating to skin and eyes. It may cause irritation to respiratory system and gastrointestinal tract.

RTECS # Unlisted

LD50 Oral Rat: 364.86 mg/kg (Predicted Oral rat LD50 from Consensus method)

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes eye irritation.

Respiratory or skin sensitization : No data available

Germ cell Mutagenicity : No data is available.

Carcinogenicity : No data is available.

Not listed as a carcinogen by ACGIH, IARC, and NTP.

Reproductive toxicity : No data is available.

STOT-single exposure : May cause respiratory irritation.

STOT- repeated exposure : No data available.

Aspiration Hazards : No data available.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

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Ecotoxicity:

Do not empty into drains.

12.2. Persistence and degradability

Soluble in water Persistence is unlikely based on information available.

12.3. Bio accumulative potential

Not available

12.4. Mobility in soil (Estimated)

Will likely be mobile in the environment due to its water solubility.

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

Environment Fate:

Much information on the effect of 3-bromopyridine on environment and ecology is not available but even then 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

- Burn in a chemical incinerator equipped with an afterburner and scrubber.
- Exert extra care in igniting, as this material is combustible.
- 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 13: TRANSPORT INFORMATION

• 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.

ADR	IMDG	IATA
14.1. UN number		
1993	1993	1993
FLAMMABLE LIQUID	FLAMINABLE LIQUID 3	FLAMMABLE LIQUID
14.2. UN proper shipping name		
Flammable liquid, N.O.S (3-Bromopyridine)	Flammable liquid, N.O.S (3-Bromopyridine)	Flammable liquid, N.O.S (3-Bromopyridine)
14.3. Transport hazard class(es)		
Flammable class 3	Flammable class 3	Flammable class 3
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment : No	Marine pollutant : No	Dangerous for the environment : No
	No supplementary information available	

SECTION 15: REGULATORY INFORMATION

European Union Information

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

- Hazards Class and Category: STOT (single exposure) Cat. 3; Eye Irrit. Cat 2; Skin Irrit. Cat 2, Acute tox. Cat. 4, Flam. Liq. Cat 3;
- Hazard Statements: H335, H315, H319, H302, H226

Chemical Inventory Lists:	Status



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TSCA:	Listed
EINECS:	210-952-0
Canada(DSL/NDSL):	Listed/NDSL
Japan:	Not listed
Korea:	Not listed
Australia:	Listed
China: IECSC	Listed
New Zealand	Listed

US information

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

Hazardous substance RQs: 3-Bromopyridine not listed

SARA 302/304: 3-Bromopyridine not listed

SARA 311/312: See section 2 for more information California Prop. 65: 3-Bromopyridine not listed CAA (Clean Air Act): 3-Bromopyridine not listed CWA (Clean Water Act): 3-Bromopyridine not listed

EU Information

Water hazard class (WGK) 3, Severe hazards to water

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

SECTION 16: OTHER INFORMATION

a) Compilation information of safety data sheet

Date of compilation : June 30, 2022 Chemical : 3-Bromopyridine

CAS # : 626-55-1

File Name : 0536Gj Ghs02 Div.3 sds 3-Bromopyridine

Revision Number : 02

Date of Issue of SDS : February 06, 2024 Revision Due Date : January, 2027

Supersedes date : 0536Gj Ghs01 Div.3 sds 3-Bromopyridine

b) 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 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.
- 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.
- 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 Authorization and Restriction of Chemicals.
- CLP = Classification, Labelling and Packaging.



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- LD / LC = Lethal Doses / Lethal Concentration.
- GHS = Globally Harmonized System.
- ADR = Accord European relative au transport international de merchandises.
- 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

- Globally Harmonized System of Classification and Labelling of Chemicals.
- CLP REG (regulation) (EC) no. 1272/2008, last modification by regulation (EC) no. 790/2009

d) List of hazard statements

Hazards Statements	 H335: May cause respiratory irritation. H315: Causes skin irritation. H319: Causes serious eye irritation.
	H302: Harmful if swallowed.
	H226: Flammable liquid and vapor.

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)