



5-Bromo-7-Azaindole

Safety Data Sheet

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

Date of Compilation	: October 4, 2017
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5-Bromo-7-Azaindole

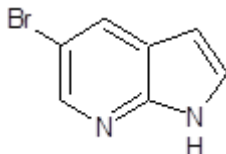
Safety Data Sheet

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

1.1. Product identifier

PRODUCT NAME	: 5-Bromo-7-Azaindole
CAS RN	: 183208-35-7
EC#	: 629-247-8
SYNONYMS	: 5-Bromo-1H-pyrrolo[2,3-b]pyridine
SYSTEMATIC NAME	: 5-Bromo-1H-pyrrolo[2,3-b]pyridine
MOLECULAR FORMULA	: C7H5BrN2
STRUCTURAL FORMULA	



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

1.2.1. Relevant identified uses

In Chemical Synthesis, Heterocyclic Building Blocks, Pharmaceutical building block.

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

Acute toxicity Oral: Category 4

Skin Corrosion/irritation: Category 2

Serious eye damage/irritation: Category 1

Specific Target organ toxicity: Category 3

(Single exposure)

Hazardous to Aquatic environment-Chronic Hazard: Category 2

[Note: Category 1 is most hazardous and Category 4 is least Hazardous for each Hazard classification.]

2.2. Label Elements

Hazard Pictogram: GHS05, GHS07, GHS09



Signal Word: Danger!

HAZARD AND PRECAUTIONARY STATEMENTS:**HAZARD STATEMENTS**

- H302: Harmful if swallowed
- H315: Causes skin irritation
- H318: Causes serious eye damage.
- H335: May cause respiratory irritation
- H411: Toxic to Aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

- 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.
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P271: Use only outdoors or in a well-ventilated area.
- P273: Avoid release to the environment
- 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.
- P332+P313: If skin irritation persists: Get medical advice and attention.
- P362: Take off contaminated clothing and wash before rinse.
- P305+P351+P338 IF 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.
- 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
- P391: Collect spillage
- P403+P233: 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

Chemical	CAS #	EC#	Purity
5-Bromo-7-Azaindole	183208-35-7	629-247-8	>98%

SECTION 4: FIRST AID MEASURES**4.1. Description of first aid measures**

- Remove affected person from danger area. Do not leave affected persons unsupervised. Seek medical treatment. First aid personnel should pay attention to their own safety. Take off all contaminated clothing immediately
- **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.

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

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

SECTION 5 : FIRE-FIGHTING MEASURES

5.1. Extinguishing media

- Suitable: water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

5.2. Special hazards arising from the substance or mixture

- **Fire hazard:** emits toxic fumes under fire conditions.
- **Explosion hazard:** Risk of explosion with vapours in confined spaces, drainage and sewage system.
- **Reactivity in case of fire:** Thermal decomposition generates: Toxic vapours which could include nitrogen oxides, carbon monoxide and carbon dioxide.
- **Hazardous decomposition products in case of fire:** Hazardous decomposition products may be released during prolonged heating like smokes, carbon dioxide, nitrogen oxides.

5.3. Advice for firefighters

- **Precautionary measures fire:** Appropriate self-contained breathing apparatus may be required.
- **Firefighting instructions:** Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. In case of major fire, evacuate area.
- **Protective equipment for firefighters:** Do not enter fire area without proper protection equipment, including respiratory protection

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General measures

- Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.
- Avoid dust formation. Avoid breathing vapours, mist or gas. Avoid contact with skin and eyes.
- Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate

6.2. Environmental precautions

- Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release

6.3. Methods and materials for containment and cleaning up

- Clean up all spills immediately following relevant Standard Operating Procedures.
- Wipe up spillage or collect spillage using a high-efficiency vacuum cleaner. Avoid breathing dust.
- Place spillage in appropriately labeled container for disposal. Wash spill site.

6.4. Reference to other sections

- For disposal see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

- Do not breathe dust, vapor or mist.
- 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.
- Technical measures - processing in closed systems
 - provide suitable exhaust ventilation at the processing machines
 - transfer and handle in enclosed systems, if possible
 - avoid dust formation; high dust explosion hazard
- Handle in accordance with good industrial hygiene and safety procedures. Avoid Prolonged or repeated exposure. Take precautionary measures against electrostatic discharge

7.2. Storage

- Store at ambient temperature in a well-ventilated place. Keep container tightly closed when not in use.
- Keep away from all heat sources, including direct sun-light, open flame, source of ignition, sparks etc.
- Keep away from light and humidity.

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

- **Exposure Limits Values**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
5-Bromo-7-Azaindole	Not established	Not established	Not established



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Exposure Limits (International):

- Not available.

OSHA Vacated PELs:

- No OSHA Vacated PELs are listed for this chemical.

8.2. Exposure controls

Appropriate Engineering Controls:

- General industrial hygiene practice.
- 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.

8.3. Personal Protection

- **Hand Protection:** Wear suitable gloves resistant to chemical penetration
- **Eye Protection:** Chemical safety goggles
- **Body Protection:** Wear suitable protective clothing.
- **Respiratory protection:** Where respirators are deemed necessary to reduce or control occupational exposure, use NIOSH-approved respiratory protection and have an effective respirator program in place.

Additional Information

- Only use protective equipment in accordance with national/international regulations. Follow the national regulation about wearing personal protective equipment and the warranty given.
- Apply skin protective barrier cream
- Do not inhale substances, work under hood.

Control of environmental exposure

- Do not let product enter drains.
- Wash hands and face after working with the substance.
- Under no circumstances eat or drink at the workplace.
- Do not inhale substances, work under hood.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

- Information on basic physical and chemical properties.

Sr.No.	Parameter	Typical value
1.	Appearance	Off-white to grey to light yellow solid
2.	Molecular weight	197.03
3.	Odor	Characteristic
4.	Odor Threshold	Not available
5.	pH	Neutral
6.	Melting point	178-179 °C
7.	Boiling point	312°C (predicted)
8.	Flash point	142°C (Predicted)
9.	Evaporation rate (n-BuAc=1)	Not available.
10.	Flammability	Not a flammable solid.
11.	Upper/lower flammability or Explosive limits	Not available.
12.	Vapor pressure	3.58e-04mm Hg
13.	Vapor density (air=1)	Not available.
14.	Relative density	1.77g/cm ³
15.	Solubility	52.5 - 66.4 mg/L @ 20 - 25 °C and pH 6.5 - 6.6 in water
16.	Partition coefficient (Octanol /water)	1.8 @ 25 °C and pH 7
17.	Auto-ignition temperature	>400°C
18.	Decomposition temperature	Not available.
19.	Viscosity	Not available.
20.	Explosive property	Not available
21.	Oxidizing property	Not available



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SECTION 10: STABILITY AND REACTIVITY

- **Reactivity:** No data available
- **Chemical Stability:** Stable under recommended storage condition
- **Conditions to avoid:** Keep away from heat, sparks, flame, high temperature, Light and incompatible, strong oxidants.
- **Incompatible chemicals:** Strong oxidizing agents, Strong acids.
- **Hazardous decomposition:** Hazardous decomposition products formed under fire conditions.-Carbon monoxide, Nitrogen oxides & Toxic fumes
- **Hazardous Polymerization:** Not reported.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

LD 50 (Rat) (Oral) – 571 g/Kg (Predicted Oral rat LD 50 from concensus method)

RTECS

Skin corrosion/irritation	:	Causes skin irritation. .
Serious eye damage/irritation	:	Causes serious eye damage and eye irritation.
Respiratory or skin sensitization	:	No data available.
Germ cell Mutagenicity	:	No data available.
Carcinogenicity	:	Not listed by NTP, IARC and OSHA.
Reproductive toxicity	:	No data 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

- LC50-96 Hour-fish9mg/L) : Not available
- EC50-48 Hour-Daphnia Magna (mg/L) : 6.42 mg/L
- EC50-72 Hour-Algae (mg/L) : 21.8 mg/L
- Short-term toxicity to aquatic invertebrates
 - EC50 (48 h) 6.42 mg/L
 - EC50 (24 h) 7.25 mg/L
 - NOEC (48 h) 4.71 mg/L
 - NOEC (24 h) 4.68 mg/L
- Toxicity to aquatic algae and cyanobacteria
 - EC50 (72 h) 15.1 - 21.8 mg/L
 - NOEC (72 h) 3.35 - 7.52 mg/L
 - EC10 (72 h) 7.4 - 11 mg/L
 - EC20 (72 h) 9.9 - 14.4 mg/L

12.2. Persistence and degradability

5-Bromo-7-azaindole (183208-35-7)

Persistence and degradability Expected not to be readily biodegradable.

12.3. Bio accumulative potential

5-Bromo-7-azaindole (183208-35-7)



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Bio concentration factor (BCF REACH)	1.37 to 5.85(range), 3.61(predicted)
Log Pow	1.8 @ 25 °C and pH 7

12.4. Mobility in soil

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Soil Adsorp. Coeff.	63.6L/Kg
Henry's Law Constant	6.26e-08 atm-m ³ /mole

12.5. Other adverse effects

- Environment Fate:**

This material expected to be toxic to the animals or aquatic life. 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

- Contact a licensed professional waste disposal service to dispose of this material. Dispose in a safe manner in accordance with local/national regulation. Observe all federal, state and local environmental regulation

SECTION 14: TRANSPORT INFORMATION

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

ADR/ RID/ DOT	IMDG	IATA
14.1. UN number		
3077	3077	3077
14.2. UN proper shipping name		
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(5-Bromo-7-azaindole)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(5-Bromo-7-azaindole)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(5-Bromo-7-azaindole)
14.3. Transport hazard class(es)		
9	9	9
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment : yes	Dangerous for the environment : yes Marine pollutant : yes	Dangerous for the environment : yes
No supplementary information available		

SECTION 15: REGULATORY INFORMATION

Classification as per CLP Regulation 1272/2008:

Hazards Class and Category:

- Acute toxicity Oral: Category 4
- Skin Corrosion/Irritation: Category 2
- Serious eye damage/Irritation: Category 1
- Specific Target organ toxicity: Category 3 (Single exposure)
- Hazardous to Aquatic environment-Chronic Hazard: Category 2

Hazard Statements: H302; H315; H318; H319; H335, H411

Chemical Inventory Lists:	Status
TSCA:	Not Listed
EINECS:	Listed
EC Inventory	629-247-8
Canada(DSL/NDSL):	Not Listed



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<i>China Catalog of Hazardous chemicals 2015</i>	<i>Not Listed</i>
<i>New Zealand Inventory of Chemicals (NZIoC)</i>	<i>Not Listed</i>
<i>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</i>	<i>Not Listed</i>
<i>Vietnam National Chemical Inventory</i>	<i>Not Listed.</i>
<i>China: IECSC</i>	<i>Not Listed</i>

US information

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act): 5-Bromo-7-azaindole is not listed

SARA 302/304 : 5-Bromo-7-azaindole is not listed

SARA 311/312 : See section 2 for more information

California Prop. 65: 5-Bromo-7-azaindole is not listed

CAA (Clean Air Act): 5-Bromo-7-azaindole is not listed

CWA (Clean Water Act): 5-Bromo-7-azaindole is not listed

EU Information

Water hazard class (WGK): WGK 3 (Severely hazardous to water)

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006: 5-Bromo-7-azaindole is not listed

SECTION 16: OTHER INFORMATION

a) Compilation information of safety data sheet

Date of compilation	: October 4, 2017
Chemical	: 5-Bromo-7-Azaindole
CAS #	: 183208-35-7
File Name	: 0845Gj Ghs05 Div.3 sds 5-Bromo-7-Azaindole
Revision Number	: 05
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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 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.



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- 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.
- 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
- 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)
