



## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1: Identification

#### 1.1 Product identifiers

**Product Name :** 2-Bromopyridine  
**Cat No.:** AC107400000; AC107400250; AC107401000; AC107405000  
**CAS No. :** 109-04-6

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

**Recommended uses :** Laboratory chemicals  
**Uses advised against:** Food, drug, pesticide or biocidal product use.

#### 1.3 Details of the supplier of the safety data sheet

**Company :** Krishna Solvechem Limited.  
B/503, Sahayog, S. V. Road,  
Kandivali (West), Mumbai – 400067. India.  
**Telephone :** +91-22-6123 0222  
**Email :** exports@kscl.co.in

#### 1.4 Emergency telephone number

**Emergency Phone :** +91-8657457330

### SECTION 2: Hazards identification

#### 2.1 Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	(Category 3)
Acute oral toxicity	(Category 3)
Acute dermal toxicity	(Category 2)
Skin Corrosion/Irritation	(Category 2)
Serious Eye Damage/Eye Irritation	(Category 2)
Specific target organ toxicity (single exposure)	(Category 3)
Target Organs - Respiratory system.	

#### 2.2 Label elements

**Pictogram :**



**Signal word**

Danger

**Hazard statement (s)**

Highly flammable liquid and vapor



Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation  
Toxic if swallowed  
Fatal in contact with skin

**Precautionary statement (s)**

**Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection  
Do not eat, drink or smoke when using this product  
Do not get in eyes, on skin, or on clothing  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking

Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting/equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Keep cool

**Inhalation :**

IF INHALED: 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

**IF ON SKIN (or hair):**

If skin irritation occurs: Get medical advice/attention  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse

**Eyes:**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention

**Fire**

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Storage:**

Store locked up  
Store in a well-ventilated place.  
Keep container tightly closed

**Ingestion:**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth



<b>Hazards not otherwise classified (HNOC)</b>	<p><b>Disposal:</b> Dispose of contents/container to an approved waste disposal plant</p> <p>None identified</p>
--	--

### SECTION 3: Composition / information on ingredients

**3.1**

Component	CAS-No	Weight %
Pyridine,2-bromo-	109-04-6	<=100

### SECTION 4: First aid measures

**4.1 Description of first aid measures**

<b>General Advice:</b>	If symptoms persist, call a physician.
<b>If inhalation :</b>	Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method 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. Immediate medical attention is required.
<b>In case of skin contact :</b>	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
<b>In case of eye contact :</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Ingestion :</b>	Do not induce vomiting. Call a physician or poison control center immediately
<b>4.2 Most important symptoms and effects :</b>	None reasonably foreseeable. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting
<b>4.3 Notes to Physician :</b>	Treat symptomatically

### SECTION 5: Firefighting effects

**5.1 Extinguishing media**

Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

**5.2 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. Fire-fighters must wear Self Contained Breathing Apparatus (SCBA). Report any run-off of firewater's contaminated with this chemical as per local and federal procedures applicable



### **5.3 Unusual fire and explosion hazard**

Toxic vapors may be released on thermal decomposition including nitrogen oxides, carbon monoxide and cyanide. High vapor concentration may result in an explosion hazard. When heated to decomposition, it emits highly toxic fumes. Vapors are heavier than air. May travel considerable distance from source and flashback.

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges

### **6.2 Environmental precautions**

Should not be released into the environment.

### **6.3 Methods and materials for containment and cleaning up**

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges.

### **7.2 Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Incompatible Materials. Strong oxidizing agents. Strong acids. Acid chlorides.



## SECTION 8: Exposure controls/personal protection

### 8.1 Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Engineering Measures

Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

### 8.2 Exposure controls

#### Personal protective equipment -

##### Eye / Face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

##### Skin protection and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

##### Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

##### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice..

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>a) Appearance</b>	Light brown Liquid
<b>b) Odour</b>	Odorless
<b>c) Odour Threshold</b>	No information available
<b>d) pH</b>	6-7 25 g/l aq.sol
<b>e) Melting point / freezing point</b>	No data available
<b>f) Initial boiling point and</b>	192 - 194 °C / 377.6 - 381.2 °F @ 761 mmHg



<b>boiling range</b>	
<b>g) Flash point</b>	54 °C / 129.2 °F
<b>h) Evaporation rate</b>	No information available
<b>i) Flammability (solid, gas)</b>	Not applicable
<b>j) Upper/lower flammability or explosive limits</b>	No data available No data available
<b>k) Vapour pressure</b>	No information available
<b>l) Vapour density</b>	No information available
<b>m) Specific Gravity</b>	1.650
<b>n) Solubility</b>	Solubility in water is 2.5g/L at 20 °C. Soluble in organic solvent like Methanol, Isopropyl Alcohol, Tetrahydrofuran, Ethyl Acetate, Acetone and Toluene etc
<b>o) Partition coefficient: n octanol/water</b>	1.42 (estimated)
<b>p) Auto-ignition temperature</b>	> 400°C.
<b>q) Decomposition temperature</b>	No information available
<b>r) Viscosity</b>	No information available
<b>s) Molecular formula</b>	C5 H4 Br N
<b>t) Molecular Weight</b>	158

### SECTION 10: Stability and Reactivity

<b>10.1 Reactive Hazard :</b>	None known, based on information available
<b>10.2 Chemical stability :</b>	Stable under normal conditions.
<b>10.3 Possibility of hazardous reactions :</b>	None under normal processing.
<b>10.4 Conditions to avoid :</b>	Keep away from open flames, hot surfaces and sources of ignition. Incompatible products.
<b>10.5 Incompatible materials:</b>	Strong oxidizing agents, Strong acids, acid chlorides
<b>10.6 Hazardous decomposition products :</b>	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Hydrogen halides Nitrogen oxides (NO <sub>x</sub> )
<b>10.7 Hazardous Polymerization</b>	Hazardous polymerization does not occur



## SECTION 11: Toxicological information

### 11.1

#### Information on toxicological effects

##### Acute toxicity:

##### Product Information:

Oral LD50 Category 3

Dermal LD50 Category 2

##### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Pyridine, 2-bromo-	LD50 = 92 mg/kg ( Rat )	LD50 = 81.5 mg/kg ( Rabbit )	Not listed

**Toxicologically Synergistic Products** No information available

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation :** Irritating to eyes, respiratory system and skin

**Sensitization:** No information available

**Carcinogenicity :** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Pyridine, 2-bromo-	109-04-6	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects:** No information available.

**Reproductive Effects:** No information available.

**Developmental Effects :** No information available.

**Teratogenicity:** No information available.

**STOT - single exposure :** Respiratory system

**STOT - repeated exposure:** None known

**Aspiration hazard :** No information available.

**Symptoms / effects, both acute and delayed:** Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

**Endocrine Disruptor Information :** No information available

**Other Adverse Effects :** The toxicological properties have not been fully investigated.



## SECTION 12: Ecological information

<b>12.1 Ecotoxicity:</b>	Do not empty into drains.
<b>12.2 Persistence and degradability:</b>	Soluble in water Persistence is unlikely based on information Available. Insoluble in water
<b>Bioaccumulation/ Accumulation</b>	No information available
<b>12.3 Mobility:</b>	Will likely be mobile in the environment due to its water solubility.

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods:** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## SECTION 14: Transport information

<b>14.1 UN number :</b>	ADR/RID: UN 2929 IMDG: UN 2929 IATA: UN 2929		
<b>14.2 UN proper shipping name</b>			
<b>ADR/RID :</b>	Toxic liquid, flammable, organic N. O. S.		
<b>IMDG :</b>	Toxic liquid, flammable, organic N. O. S.		
<b>IATA :</b>	Toxic liquid, flammable, organic N. O. S.		
<b>14.3 Transport hazard class(es)</b>	ADR/RID: 6.1	IMDG: 6.1	IATA: 6.1
<b>14.4 Packaging group:</b>	ADR/RID: II	IMDG: II	IATA: II

## SECTION 15: Regulatory information

**15.1 United states of America Inventory:**

Component	CAS-No	TSCA	TSCA Inventory notification Active/Inactive	TSCA - EPA Regulatory Flags
Pyridine, 2-bromo-	109-04-6	X	ACTIVE	-

**Legend:**





**TSCA - Toxic Substances Control Act, (40 CFR Part 710)**

X - Listed

'-' - Not Listed

**TSCA 12(b) - Notices of Export** Not applicable

**International Inventories:**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Pyridine, 2-bromo-	109-04-6	-	X	203-641-6	-	-	X	X	X	-

**U.S. Federal Regulations**

**SARA 313** Not applicable

**SARA 311/312 Hazard Categories** See section 2 for more information

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA - Occupational Safety and Health Administration** Not applicable

**CERCLA** Not applicable

**California Proposition 65** This product does not contain any Proposition 65 chemicals.

**15.2 U.S. State Right-to-Know Regulations:**

Not applicable

**U.S. Department of Transportation**

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N



**U.S. Department of Homeland Security** - This product does not contain the any DHS Chemicals.

**Other International Regulations**

**Mexico – Grade** No information available

**Authorization/Restrictions according to EU REACH  
Safety, health and environmental regulations/legislation specific for the substance or mixture**

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Pyridine, 2-bromo-	109-04-6	Not applicable	Not applicable	Not applicable	Not applicable

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Pyridine, 2-bromo-	109-04-6	Not applicable	Not applicable	Not applicable	Not applicable

**SECTION 16: Other information**

**16.1 Prepared By:** Regulatory affairs  
Krishna Solvechem Limited  
**Email:** exports@kscl.co.in  
**Revision Summary:** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 C F R 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**16.2 Disclaimer:**  
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.