



MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Identification

1.1 Product identifiers

Product Name : Hydrogen Bromide Solution

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, Shayog, 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)

Skin corrosion	(Category 1 B), H314
Serious eye damage	(Category 1), H318
Specific target organ toxicity single exposure	(Category 3), H335
Target organs – Respiratory system	

For full text of the H – Statements mentioned in this section, see section 16.

2.2 Label elements

Pictogram :



Signal word Danger

Hazard statement (s)

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.



Precautionary statement (s)

Prevention

- P280** Wear protective gloves/protective clothing/eye protection/face Protection
- P301 + P330 + P331** IF SWALLOWED : Rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P305 + P351 + P338 + P310** IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER / doctor.

Supplementary Hazard None

Statements

2.3 Other Hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. Lachrymator.

SECTION 3: Composition / information on ingredients

3.1

Component	CAS No	Concentration %
Acetic acid	64-19-7	>=50 - <70
Hydrobromic acid	10035-10-6	>=30 - <40

SECTION 4: First aid measures

4.1 Description of first aid measures

General Advice:	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhalation :	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact :	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
In case of eye contact :	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Ingestion :	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.



4.2 Most important symptoms and effects :	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
4.3 Notes to Physician :	Treat symptomatically
SECTION 5: Firefighting effects	
5.1 Extinguishing media	
Suitable extinguishing media	Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam.
Unsuitable Extinguishing Media: :	No information available
5.2 Flash Point :	> 65 °C
Method :	No information available
Autoignition Temperature:	No data available
Explosion Limits:	
Upper	No information available
Lower	
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available
Specific Hazards Arising from the Chemical :	Carbon oxides, Hydrogen bromide gas, combustible.
Hazardous Combustion Products :	No data available
5.4 Protective Equipment and Precautions for Firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
SECTION 6: Accidental release measures	
6.1 Personal precautions, protective equipment and emergency procedures	
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.	
6.2 Environmental precautions	
Do not let product enter drains.	
6.3 Methods and materials for containment and cleaning up	
Keep in suitable, closed containers for disposal. Soak up with inert absorbent material and dispose of as hazardous waste.	



6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. For precautions see section 2.2.

7.2 Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place. Handle and store under inert gas. Air and light sensitive. May darken on storage.

SECTION 8: Exposure controls/personal protection

8.1 Exposure Guidelines

Appropriate Engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.2 Exposure controls

Personal protective equipment -

Eye / Face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection and body protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU)2016/425 and the standard EN 374 derived from it.

Body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties	
a) Appearance	Form: Liquid
b) Odour	No data available
c) Odour Threshold	No information available
d) pH	No information available
e) Melting point / freezing point	No data available
f) Initial boiling point and boiling range	No data available
g) Flash point	> 65 °C
h) Evaporation rate	No information available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	15,2 hPa at 20 °C
l) Vapour density	No data available
m) Relative density	1,354 g/mL at 25 °C
n) Solubility	No data available
o) Partition coefficient: n octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No information available
r) Viscosity	No data available
s) Molecular formula	HBr
t) Molecular Weight	80.91 g/mol

SECTION 10: Stability and Reactivity

10.1 Reactive Hazard :	No data available
10.2 Chemical stability :	Stable under normal conditions
10.3 Possibility of hazardous reactions :	No data available
10.4 Conditions to avoid :	Light



10.5 Incompatible materials:	Oxidizing agents, Soluble carbonates and phosphates, Hydroxides, Metals, Peroxides, permanganates, for example potassium permanganate, Amines, Alcohols, Strong bases,
10.6 Hazardous decomposition products :	Carbon oxides, Hydrogen bromide gas In the event of fire : see section 5

SECTION 11: Toxicological information

11.1	
Information on toxicological effects	
Acute toxicity:	
Product Information:	
Component Information	
Toxicologically Synergistic Products	No information available
<u>Delayed and immediate effects as well as chronic effects from short and long-term exposure</u>	
Irritation :	No information available
Sensitization:	No information available
Carcinogenicity :	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Mutagenic Effects:	No information available
Reproductive Effects:	No information available.
Developmental Effects :	No information available.
Teratogenicity:	No information available.
STOT - single exposure :	None known
STOT - repeated exposure:	None known
Aspiration hazard :	No information available.



Additional Information :

RTECS : Not available

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Ingestion or inhalation of concentrated acetic acid causes damage to tissues of the respiratory and digestive tracts. Symptoms include: hematemesis, bloody diarrhea, edema and/or perforation of the esophagus and pylorus, pancreatitis, hematuria, anuria, uremia, albuminuria, hemolysis, convulsions, bronchitis, pulmonary edema, pneumonia, cardiovascular collapse, shock, and death. Direct contact or exposure to high concentrations of vapor with skin or eyes can cause: erythema, blisters, tissue destruction with slow healing, skin blackening, hyperkeratosis, fissures, corneal erosion, opacification, iritis, conjunctivitis, and possible blindness., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1

Ecotoxicity:

No data available

12.2 Persistence and degradability:

No data available

**12.3 Bioaccumulation/
Accumulation**

No information available

12.4 Mobility:

No data available

**12.5 Results of PBT and vPvB
assessment**

This substance / mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

SECTION 13: Disposal considerations

13.1 Waste treatment methods:

Product :

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging :

Dispose of as unused product



SECTION 14: Transport information

14.1 UN number :

ADR/RID : UN3265 IATA : UN3265

IATA : UN3265

14.2 UN proper shipping name

ADR/RID : CORROSIVE LIQUID, ACIDIC, ORGANIC, N. O. S.

IATA : Corrosive liquid, acidic, organic, n. o. s.

IMDG : CORROSIVE LIQUID, ACIDIC, ORGANIC, N. O. S.

14.3 Transport hazard class(es) ADR/RID : 8 IATA: 8 IMDG: 8

14.4 Packaging group: ADR/RID : II IATA: II IMDG: II

14.5 Environmental hazards ADR/RID : No
IMDG Marine pollutant : No
IATA : No

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006. REACH – Restrictions on the manufacture, placing on the market and use of certain Dangerous substances, preparations and articles (Annex XVII)

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

16.1 Full text of H-Statements referred to under sections 2 and 3.

H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.



16.2 Further information

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.