COLUMBUS CHEMICAL INDUSTRIES

Safety Data Sheet

Hydrobromic Acid, 48%, ACS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Hydrobromic Acid, 48%, ACS

Synonyms/Generic Names: Aqueous hydrogen bromide

Product Number: 2565

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Call: 920-623-2140 (Monday-Friday 8:00-4:30)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Corrosive

Target Organs: Causes damage to organs through prolonged or repeated exposure.

Signal Words: Danger

Pictograms:

GHS Classification:

Skin corrosion / irritation	Category 1
Serious eye damage / eye irritation	Category 1
Specific target organ toxicity-single exposure	Category 3, Respiratory system
Specific target organ toxicity-repeated exposure	Category 1

GHS Label Elements, including precautionary statements:

Hazard Statements:

H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H318	Causes serious eye damage.
H372	Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements:

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

P270	Do not eat, drink or smoke when using this product.
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/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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/doctor/physician.
P312	Call a POISON CENTER/doctor/physician if you feel unwell.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

Potential Health Effects

Eyes	Causes eye burns.
Inhalation	Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Ingestion	May be harmful if swallowed

NFPA Ratings

Health	3
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	3
Fire	0
Reactivity	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Hydrobromic Acid	48	10035-10-6	233-113-0	HBr	80.91 g/mol
Water	Balance	7732-18-5	231-791-2	H_2O	18.00 g/mol

4. FIRST-AID MEASURES

Eyes	Immediately rinse with plenty of water for at least 15 minutes and seek medical attention immediately.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
Ingestion	**Do Not Induce Vomiting!** Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water, keep away from common metals.

Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (hydrogen bromide gas) under fire conditions. (See also Stability and Reactivity section)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Neutralize spill with sodium bicarbonate or lime. Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

Conditions for safe storage, including any incompatibilities
Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Hydrobromic Acid	2 ppm	CEIL	ACGIH
	3 ppm 10 mg/m^3	PEL	OSHA
	3 ppm 10 mg/m^3	CEIL	NIOSH

TWA: Time Weighted Average over 8 hours of work.
TLV: Threshold Limit Value over 8 hours of work.
REL: Recommended Exposure Limit
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit during x minutes.
IDLH: Immediately Dangerous to Life or Health
WEEL: Workplace Environmental Exposure Levels
CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles, and face shield.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.

Skin	Wear nitrile or rubber gloves, and full body covering. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations
Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, colorless liquid
Odor	pungent
Odor threshold	Not Available
pH	< 1
Melting point/freezing point	-11°C (12.2°C)
Initial boiling point and boiling range	126°C (258.8°F)
Flash point	Not Available
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	8 mmHg @ 25°C
Vapor density	Not available
Relative density	1.50 g/cm3 (water = 1)
Solubility (ies)	Completely soluble in water
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Reacts with most metals.
Incompatible Materials	Alkalis, oxidizers, amines, halogens, metals, strong bases, ammonia, ozone, fluorine.
Hazardous Decomposition Products	Hydrogen bromide gas.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Hydrobromic Acid

Skin	Not Available
Eyes	Not Available
Respiratory	LC50 Inhalation – rat – 2,858 mg/l - 1 hour LC50 Inhalation – mouse – 814 mg/l - 1 hour
Ingestion	Not Available

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Eyes	Burns, watering eyes.
Inhalation	Burning, choking, coughing, wheezing, laryngitis, shortness of breath, headache or nausea.
Skin	Burning, itching, redness, inflammation and/or swelling of exposed tissues.
Ingestion	Severe and rapid corrosive burns of the mouth, gullet and gastrointestinal tract, burning, choking, nausea, vomiting and severe pain.

Chronic Toxicity	Causes damage to organs through prolonged or repeated use. Prolonged inhalation may be harmful.
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Causes damage to organs through prolonged or repeated use. Prolonged inhalation may be harmful.
Reproductive Toxicity	Not expected to cause reproductive or developmental effects
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Hydrobromic Acid

Aquatic Vertebrate	Not Available.
Aquatic Invertebrate	Not Available.
Terrestrial	Not Available.

Persistence and Degradability	Not Available.
Bioaccumulative Potential	Not Available.
Mobility in Soil	Not Available.
PBT and vPvB Assessment	Not Available.
Other Adverse Effects	Because of the low pH of this product is expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

13. DISPOSAL CONSIDERATIONS

Waste Product or Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN1788, Hydrobromic Acid, 8, pg II
TDG	UN1788, HYDROBROMIC ACID, 8, pg II
IDMG	UN1788, HYDROBROMIC ACID, 8, pg II
Marine Pollutant	No
IATA/ICAO	UN1788, Hydrobromic Acid, 8, pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	All ingredients are listed on the DSL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Acute Health Hazard
SARA 312	Acute Health Hazard
SARA 313	Not Listed
WHMIS Canada	Class E: Corrosive material Class D1A: Poisonous and infectious material- Immediate and serious effects- Very toxic

16. OTHER INFORMATION

Revision	Date
Revision 1	08/15/2011
Revision 2	10/16/2013
Revision 3	12/15/2015
Revision 4	04/08/2020