



# Material Safety Data Sheet

## 1. Product and Company Identification

Product name : **Hydrogen Bromide**

Chemical formula : H-BR

Synonyms : Hydrobromic acid; Anhydrous hydrobromic acid; Hydrogen monobromide; Hydrogen bromide (HBR); Hydrogen bromide (H2BR2); UN 1048

Company : Specialty Gases of America, Inc  
6055 Brent Dr.  
Toledo, OH 43611

Telephone : 419-729-7732

Emergency : 800-424-9300

## 2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Hydrogen Bromide	10035-10-6	100%

## 3. Hazards Identification

### Emergency Overview

May cause respiratory tract burns, skin burns, eye burns, mucous membrane burns.  
Containers may rupture or explode if exposed to heat.

### Potential Health Effects

Inhalation : Burns, nausea, difficulty breathing, headache, dizziness, bluish skin color, lung congestion. May cause digestive disorders in long term exposure.

Eye contact : Burns, tearing, blindness.

Skin contact : Irritation (possibly severe).

Ingestion : Burns, nausea, vomiting, diarrhea, stomach pain, difficulty breathing, kidney damage, convulsions, coma.

Chronic Health Hazard : None.

## 4. First Aid Measures

General advice : None.

Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Skin contact : Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get immediate medical attention. Destroy contaminated clothing and shoes.

Ingestion : If swallowed, drink plenty of water, not NOT induce vomiting. Get immediate medical attention.

Inhalation : If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be

Note to physicians : administered by qualified personnel. Get immediate medical attention.  
: For inhalation, consider oxygen.  
: Avoid gastric lavage or emesis.

## 5. Fire-Fighting Measures

Suitable extinguishing media : Carbon dioxide, regular dry chemical,  
Large fires: Use regular foam or flood with fine water spray.  
Specific hazards : Negligible fire hazard. Containers may rupture or explode if exposed to heat.  
Fire fighting : Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.  
Do not get water inside container. Move container from fire area if it can be done without risk. Cool containers with water spray until well after fire is out. Stay away from the tanks. Keep unnecessary people away, isolate hazard area and deny entry.

## 6. Accidental Release Measures

Occupational spill/release : Stop leak if possible without personal risk. Reduce vapors with water spray. Do not get water directly on material. Do not get water inside container. Keep unnecessary people away, isolate hazard area and deny entry. Small spills: Flood with water. Large spills: Dike for later disposal. Stay upwind and keep out of low areas. Ventilate closed spaces before entering. Evacuation radius: 150 feet.  
Additional advice : None.

## 7. Handling and Storage

### Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

### Storage

Store in accordance with all current regulations and standards. Protect from physical damage. Store in a cool, dry place. Store in a well-ventilated area. Keep separated from incompatible substances.

## 8. Exposure Controls / Personal Protection

### Exposure limits

ACGIH : 2 ppm ceiling  
OSHA (final) : 3 ppm TWA; 10 mg/m<sup>3</sup> TWA  
OSHA (vacated) : 3 ppm ceiling; 10 mg/m<sup>3</sup> ceiling  
NIOSH : 3 ppm ceiling; 10 mg/m<sup>3</sup> ceiling

### IDLH

30 ppm

### Engineering measures/Ventilation

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

### Personal protective equipment

Respiratory protection : The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.  
30 ppm – Any supplied-air respirator operated in a continuous-flow mode.  
Any powered, air-purifying respirator with acid gas cartridge(s).  
Any air-purifying full face respirator (gas mask) with a chin-style, front-mounted

or back-mounted acid gas canister.  
 Any self-contained breathing apparatus with a full facepiece.  
 Any supplied-air respirator with a full facepiece.  
 Emergency or planned entry into unknown concentrations or IDLH conditions –  
 Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.  
 Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.  
 Escape – Any air-purifying full-facepiece respirator (gas mask) with a chin-style, front-mounted or back-mounted acid gas canister.  
 Any appropriate escape-type, self-contained breathing apparatus.

- Hand protection : Wear appropriate chemical resistant gloves.  
 Eye protection : Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.  
 Skin and body protection : Wear appropriate chemical resistant clothing.

## 9. Physical and Chemical Properties

- Form : Gas.  
 Color : Colorless.  
 Odor : Pungent odor.  
 Molecular weight : 80.92  
 Vapor pressure : 15750 mmHg @ 20°C  
 Vapor density : 2.8 (air = 1)  
 Specific gravity : 2.16 @ -67°C (water = 1)  
 Boiling point : -89°F (-67°C)  
 Melting point : -123°F (-86°C)  
 Water solubility : 194%  
 Evaporation rate : Not applicable.  
 Solvent solubility : Slightly soluble: alcohol

## 10. Stability and Reactivity

- Stability : Stable at normal temperature and pressure.  
 Conditions to avoid : Minimize contact with materials. Avoid inhalation of material or combustion by-products. Containers may rupture or explode if exposed to heat.  
 Materials to avoid : Bases, combustible materials, halogens, oxidizing materials.  
 Hazardous decomposition products : Thermal decomposition products: miscellaneous decomposition products.

## 11. Toxicological Information

The components of this material have been reviewed in various sources and the following selected endpoints are published:

- HYDROGEN : Inhalation LC50 Rat: 2858 ppm/1H  
 BROMIDE (10035-10-6)

### Acute Toxicity Level

- HYDROGEN : Moderately toxic: inhalation

BROMIDE (10035-10-6)

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, OSHA or DFG.

Local Effects

HYDROGEN : Corrosive: inhalation, skin, eye, ingestion  
BROMIDE (10035-10-6)

**12. Ecological Information**

No LOLI ecotoxicity data are available for this product's components.

**13. Disposal Considerations**

Waste from residues : Dispose in accordance with all applicable regulations.  
/ unused products  
Contaminated : Return cylinder to supplier.  
packaging

**14. Transport Information**

DOT (US only)

Proper shipping name : Hydrogen bromide, anhydrous  
Class : 2.3  
UN/ID No. : UN1048  
Labeling : Inhalation hazard; Corrosive  
Additional Info : Toxic-Inhalation Hazard Zone C

Further information

Cylinders should be transported in a secure upright position in a well ventilated truck.

**15. Regulatory Information**

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

HYDROGEN BROMIDE (10035-10-6)  
OSHA (safety) : 5000 lb TQ

SARA 311/312

Acute: Yes  
Chronic: No  
Fire: No  
Reactive: No  
Pressure: Yes

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
HYDROGEN BROMIDE	10035-10-6	Yes	Yes	Yes	Yes	Yes	Yes

Not regulated under California Proposition 65

#### 16. Other Information

Prepared by : Specialty Gases of America, Inc.

For additional information, please visit our website at [www.americangasgroup.com](http://www.americangasgroup.com).