



# Material Safety Data Sheet

## 1. Product and Company Identification

Product name : **Hydrogen Iodide**

Chemical formula : H-I

Synonyms : Hydriodic acid; Anhydrous Hydriodic acid; Hydroiodic acid; HI; UN 2197

Company : Med Tech Gases, Inc.  
20 Hall Street  
Medford, MA 02155

Telephone : 800-FINE-GAS

Emergency : 800-424-9300

## 2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Hydrogen Iodide	10034-85-2	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 : Irritation (possibly severe), lung congestion. May cause digestive disorders in long term exposure.

Eye contact : Burns.

Skin contact : Burns.

Ingestion : Burns.

Chronic Health Hazard : None known.

## 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. Thoroughly clean and dry contaminated clothing before reuse. Destroy contaminated shoes.

Ingestion : Contact local poison control center or physician immediately. Never make an unconscious person vomit or drink fluids. Give large amounts of water or milk. Allow vomiting to occur. When vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.

Inhalation : If adverse effects occur, remove to uncontaminated area. Give artificial

respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.  
Note to physician : 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.  
Fire fighting : 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 ends of tanks. Keep unnecessary people away, isolate hazard area and deny entry. Use extinguishing agents appropriate for surrounding fire. Flood with fine water spray. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Consider downwind evacuation if material is leaking.

## 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. Keep separate from incompatible substances.

## 8. Exposure Controls / Personal Protection

### Exposure limits

ACGIH, OSHA and NIOSH have not developed exposure limits for any of this product's components.

### Engineering measures/Ventilation

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

### Personal protective equipment

Respiratory protection : Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.  
Any chemical cartridge respirator with acid gas cartridge(s).  
Any chemical cartridge respirator with full facepiece and acid gas cartridge(s).  
Any air-purifying respirator with a full facepiece and an acid gas canister.  
For unknown concentrations or immediately dangerous to life or health – 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.
	Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.
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	: 127.91
Vapor pressure	: Not available.
Vapor density	: 4.5 (air = 1)
Specific gravity	: 2.85 @ -47°C (water = 1)
Boiling point	: -31°F (-35°C)
Melting point	: -58°F (-50°C)
Water solubility	: 70% @ 10°C
Evaporation rate	: Not applicable.
Solvent solubility	: Soluble: alcohol.

## 10. Stability and Reactivity

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

## 11. Toxicological Information

The components of this material have been reviewed in various sources and no selected endpoints have been identified.

### Component Carcinogenicity

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

### Local Effects

HYDROGEN IODIDE : Corrosive: inhalation, skin, eye, ingestion.  
(10034-85-2)

## 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 packaging : Return cylinder to supplier.

#### 14. Transport Information

##### DOT (US only)

Proper shipping name : Hydrogen Iodide, anhydrous  
Class : 2.3  
UN/ID No. : UN2197  
Labeling : Poison Gas.  
Additional shipping description : Toxic-Inhalation Hazard Zone C.

#### 15. Regulatory Information

##### U.S. Federal Regulations

None of this product's components are listed under SARA Section 302/304 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

##### 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 IODIDE	10034-85-2	No	Yes	No	Yes	Yes	Yes

Not regulated under California Proposition 65.