

Issue Date: 05-Apr-2023

Revision Date: 01-Jul-2024

Version 2

1. IDENTIFICATION

Product identifier**Product Name** Hydrogen Iodide**Other means of identification****SDS #** EF-046**UN/ID No** UN2197**Recommended use of the chemical and restrictions on use****Recommended Use** For industrial use.**Details of the supplier of the safety data sheet****Supplier Address**EFC Gases & Advanced Materials
3266 Bergey Road
Hatfield, PA 19440
Email: efcsafety@efcgases.com**Emergency telephone number****Company Phone Number** 215-443-9600
Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Colorless gas**Physical state** Gas**Odor** Pungent**Classification**

Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (repeated exposure)	Category 1
Gases under pressure	Liquefied gas
Simple asphyxiants	Yes

Signal Word**Danger****Hazard statements**Causes severe skin burns and eye damage
Causes damage to organs through prolonged or repeated exposure
Contains gas under pressure; may explode if heated
May displace oxygen and cause rapid suffocation

**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray
 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

Precautionary Statements - Response

Immediately call a poison center or doctor/physician
 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 or doctor/physician
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Wash contaminated clothing before reuse
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a poison center or doctor/physician
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up
 Protect from sunlight. Store in a well-ventilated place

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Hydriodic acid	10034-85-2	100

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General Advice	Provide this SDS to medical personnel for treatment.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
Skin Contact	Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115 F; 41-46 C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Immediately call a poison center or doctor/physician.

Ingestion Rinse mouth. Do NOT induce vomiting. Seek medical attention immediately.

Most important symptoms and effects, both acute and delayed

Symptoms Causes severe skin burns and eye damage. Causes damage to organs through prolonged or repeated exposure. Frostbite, suffocation. Severely irritating to the respiratory system. Inhalation or ingestion may cause mucous membrane irritation.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide (CO₂). Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire Use regular foam or flood with fine water spray.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Contains gas under pressure; may explode if heated.

Hazardous combustion products Iodinated compounds.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Keep unnecessary people away, isolate hazard area and deny entry. Avoid heat, flames, sparks and other sources of ignition. Reduce vapors with water spray. Remove sources of ignition. Ventilate closed spaces before entering. Damaged cylinders should be handled only by specialists.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing and eye/face protection. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Incompatible Materials

Combustible material. Halogens. Metals. Oxidizing materials. Peroxides.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydriodic acid 10034-85-2	TWA: 0.01 ppm inhalable fraction and vapor	-	-

Appropriate engineering controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas. Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Wear splash resistant safety goggles with a faceshield. Refer to 29 CFR 1910.133 for eye and face protection regulations.

Skin and Body Protection

For the gas: protective clothing and gloves are not required, but recommended. For the liquid: Wear appropriate protective, cold insulating clothing and gloves. Refer to 29 CFR 1910.138 for appropriate skin and body protection.

Respiratory Protection

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive pressure mode. Refer to 29 CFR 1910.134 for respiratory protection requirements.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Gas	Odor	Pungent
Appearance	Colorless gas	Odor Threshold	Not determined
Color	Colorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	
Melting point / freezing point	-50 °C / -58 °F	
Initial boiling point and boiling range	-35 °C / -31 °F	
Flash point	Not flammable	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor Pressure	Not determined	
Vapor Density	4.5	(Air=1)
Relative Density	2.85 @-47°C	
Water Solubility	70% @10°C	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Autoignition temperature	No data available	
Decomposition temperature	Not determined	
Kinematic viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	
<u>Other information</u>		
Molecular weight	127.91	
VOC Content	Molecular Formula: H-I	
Bulk density	6.6 g/L	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children.

Incompatible materials

Combustible material. Halogens. Metals. Oxidizing materials. Peroxides.

Hazardous decomposition products

Iodinated compounds.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Avoid contact with eyes.
Skin Contact	Avoid contact with skin. Contact with the liquefied or pressurized gas may cause frostbite ("cold" burn).
Inhalation	Do not inhale. Acts as a simple asphyxiant.
Ingestion	Do not ingest.

Component Information

Not available

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Please see section 4 of this SDS for symptoms.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Causes severe skin burns.
Serious eye damage/eye irritation	Causes severe eye damage.
Carcinogenicity	Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Chemical name	ACGIH	IARC	NTP	OSHA
Hydriodic acid 10034-85-2		Group 1		X

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document Not available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence/Degradability

Not determined.

Bioaccumulation

There is no data for this product.

Mobility

Not determined

Other adverse effects

Not determined

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods**

Disposal of Wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated Packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No	UN2197
Proper Shipping Name	Hydrogen Iodide, anhydrous
Transport hazard class(es)	2.3
Subsidiary Hazard Class	8

IATA

UN number or ID number	UN2197
Proper Shipping Name	Hydrogen Iodide, anhydrous
Transport hazard class(es)	2.3
Subsidiary hazard class	8

IMDG

UN number or ID number	UN2197
Proper Shipping Name	Hydrogen Iodide, anhydrous
Transport hazard class(es)	2.3
Subsidiary Hazard Class	8

15. REGULATORY INFORMATION**International Inventories**

Chemical name	TSCA	TSCA Inventory Status	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Hydriodic acid	X	ACTIVE	X	X	X	X	X	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Hydriodic acid 10034-85-2	X	X	X

16. OTHER INFORMATION

<u>NFPA</u>	Health hazards	Flammability	Instability	Special hazards
	3	0	0	-
<u>HMIS</u>	Health hazards	Flammability	Physical hazards	Personal Protection
	-	-	-	Not determined

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 Revision Note: Regulatory review

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 a 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.

End of Safety Data Sheet