



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation Hydrogen Sulfide Water, Saturated

Product Number 3850

Other Identifying Product Numbers 3850-16, 3850-32, 3850-4

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company Ricca Chemical Company

Address 412 West Fork Drive

Arlington, TX 76012 USA

Telephone 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA) 800-424-9300

CHEMTREC (International) 1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

Hazard Class	Category	Hazard Statements	Precautionary Statements
Corrosive to the Respiratory Tract	Corrosive		
Hazardous to the Aquatic Environment, Short-term (Acute)	Acute 3	H402	P273,P501

2.2. GHS Label Elements

Pictograms:



Signal Word:

Hazard Statements:

NOTE: Hazard statements may be combined on labels to improve clarity and readability.

Hazard Number	Hazard Statement
H402	Harmful to aquatic life
	Corrosive to the respiratory tract

Precautionary Statements:

NOTE: Precautionary statements may be combined or consolidated on labels to improve clarity and readability.

Prevention

Precautionary Number	Precautionary Statement
P273	Avoid release to the environment.

Disposal

Precautionary Number	Precautionary Statement
P501	Dispose of contents/container to suitable waste stream in accordance with local, state, federal, and international regulations.

2.3. Hazards not Otherwise Classified

No other hazards identified.

2.4. Ingredients of Unknown Acute Toxicity

This product does not contain any ingredients of unknown acute toxicity.

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SECTION 3: Composition / Information on Ingredients

3.1. Components of Mixture

Chemical Name (IUPAC)	Common Name and Synonyms	CAS Number	Weight%
water	Water	7732-18-5	99.60
sulfane	Hydrogen Sulfide	7783-06-4	0.40

SECTION 4: First-Aid Measures

4.1. Description of Necessary Measures

Eye Contact: May cause irritation, redness, pain, and tearing.

Ingestion: Dilute with water or milk. Vomiting may occur spontaneously but do not induce. Call a physician immediately.

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: May cause irritation, redness, and pain.

4.2. Most Important Symptoms and Effects, Acute and Delayed

WARNING! Poisonous fumes and liquid. Use with adequate ventilation. Avoid breathing vapor. Avoid contact with skin, eyes or clothing. If ingested, give large quantity of water and call a physician. Wash areas of contact with plenty of water. For eyes, get medical attention. **EYE CONTACT:** May cause irritation, redness, pain, and tearing. **SKIN CONTACT:** May cause irritation, redness, and pain. **CHRONIC EFFECTS / CARCINOGENICITY:** May result in headaches, inflammation of the conjunctivae and eyelids, digestive disturbances, weight loss and general debility.

4.3. Immediate Medical Attention or Special Treatment Needed

Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Observe 48 hours for lung effects. Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops. Dilute with water or milk. Vomiting may occur spontaneously but do not induce. Call a physician immediately.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire.

5.2. Specific Hazards Arising from the Substance or Mixture in a Fire

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment and Precautions for Firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear appropriate PPE for the size and nature of the spill. As a general rule, wear safety glasses and gloves.

6.2. Cleanup and Containment Methods and Materials

Eliminate all sources of ignition. Ventilate area. Allow to vaporize. Wash area with Sodium Bicarbonate.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Keep tightly capped. Store in the refrigerator.

SECTION 8: Exposure Controls / Personal Protection

8.1. Exposure Limits

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U.S. OSHA - Permissible Exposure Limits (PEL) - Time Weighted Averages (TWA)

No limits found.

U.S. OSHA - Permissible Exposure Limits (PEL) - Ceiling Limits

Chemical Name	CAS Number	Exposure Limit
Hydrogen Sulfide	7783-06-4	20 ppm Ceiling

U.S. OSHA - Permissible Exposure Limits (PEL) - Short Term Exposure Limits (STEL)

No limits found.

U.S. OSHA - Specifically Regulated Chemicals

No limits found.

ACGIH - Threshold Limit Values - Ceilings (TLV-C)

No limits found.

ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

Chemical Name	CAS Number	Exposure Limit
Hydrogen Sulfide	7783-06-4	5 ppm STEL

ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

Chemical Name	CAS Number	Exposure Limit
Hydrogen Sulfide	7783-06-4	1 ppm TWA

8.2. Engineering Controls

Work in fume hood.

8.3. Individual Protective Measures and Personal Protective Equipment

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator with a multi gas cartridge can be used for escape purposes only.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Physical State:	liquid
Color:	Colorless
Odor:	Data not available.
Odor Threshold:	Data not available.
Melting/Freezing Point:	0.0°C
Boiling Point/Range:	100°C
Flammability:	Data not available.
Flammability/Explosive Limits:	Data not available.
Flash Point:	Data not available.
Auto-Ignition Temperature:	Data not available.
Decomposition Temperature:	Data not available.
pH:	4.5
Kinematic Viscosity:	Data not available.
Solubility:	miscible
Vapor Pressure:	Data not available.
Evaporation Rate:	Data not available.
Relative Density:	1.00
Relative Vapor Density:	Data not available.
Particle Characteristics:	Data not available.
Partition Coefficient n-octanol/water, log	Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

This solution is not stable. Turbidity or precipitation of Sulfur due to air oxidation is normal with aging.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Elevated temperatures, strong oxidizers, metals. Attacks some forms of rubber, plastics and coatings.

10.4. Hazardous Decomposition Products

Will not occur.

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SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not acutely toxic.

Acute Toxicity - Dermal Exposure:

Not acutely toxic.

Acute Toxicity - Inhalation Exposure:

Not acutely toxic.

Chemical Name	CAS Number	Toxicity
Hydrogen Sulfide	7783-06-4	Inhalation LC50 444 ppm 4 h (Source: Canada_WHMIS)

11.2 Carcinogenicity:

International Agency for Research on Cancer (IARC)

Chemical Name	CAS Number	Classification
No data found.		

National Toxicology Program (NTP)

Chemical Name	CAS Number	Classification
No data found.		

U.S. OSHA specifically regulated carcinogens

Chemical Name	CAS Number	Classification
No data found.		

11.3 Additional Toxicology Information:

Corrosive to the respiratory tract.

SECTION 12: Ecological Information

12.1. Ecotoxicity



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Chemical Name	CAS Number	Species	Exposure	Toxicity
Hydrogen Sulfide	7783-06-4	Freshwater Fish	Acute	LC50 96 h <i>Lepomis macrochirus</i> 0.0448 mg/L [flow-through]; LC50 96 h <i>Pimephales promelas</i> 0.016 mg/L [flow-through]

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Add to a large volume of Ferric Chloride solution with stirring. Add more Ferric Chloride if necessary. After reduction is complete, add soda ash with stirring until neutral. Wash down drain with excess water. Always dispose of in accordance with local, state and federal regulations.

SECTION 14: Transportation Information

14.1 Transportation by Land - Department of Transportation (DOT, United States of America)

Sizes: 1 L, 120 mL, 500 mL

UN Number: UN3287

Proper Shipping Name: Toxic Liquid, Inorganic, n.o.s. (Hydrogen Sulfide)

Hazard Class: 6.1

Packing Group: III

Hazard Label(s):





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14.2 Transportation by Air - International Air Transport Association (IATA)

Sizes: 1 L, 120 mL, 500 mL

UN Number: UN3287

Proper Shipping Name: Toxic Liquid, Inorganic, n.o.s. (Hydrogen Sulfide)

Hazard Class: 6.1

Packing Group: III

Hazard Label(s):



14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 1 L, 120 mL, 500 mL

UN Number: UN3287

Proper Shipping Name: TOXIC LIQUID, INORGANIC, N.O.S. (hydrogen sulfide)

Hazard Class: 6.1

Packing Group: III

Hazard Label(s):



SECTION 15: Regulatory Information

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15.01. Occupational Safety and Health Administration (OSHA) Hazards

Chemical Name	CAS Number	Regulatory Information
No data found.		

15.02. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Chemical Name	CAS Number	RQ	TPQ
Hydrogen Sulfide	7783-06-4	500 lb TPQ	100 lb EPCRA RQ

15.03. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Chemical Name	CAS Number	Regulatory Information
Hydrogen Sulfide	7783-06-4	100 lb final RQ; 45.4 kg final RQ

15.04. Superfund Amendments and Reauthorization Act (SARA) 313 Toxics Release Inventory (TRI)

Chemical Name	CAS Number	List	Regulatory Information
Hydrogen Sulfide	7783-06-4	Emission Reporting	1.0 % de minimis concentration

15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Hydrogen Sulfide	7783-06-4	Extraordinarily hazardous

15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Hydrogen Sulfide	7783-06-4	Environmental hazard

15.07. New Jersey Worker and Community Right-to-Know Components

Chemical Name	CAS Number	Regulatory Information
Hydrogen Sulfide	7783-06-4	sn 1017

15.08. California Proposition 65

Chemical Name	CAS Number	Regulatory Information
No data found.		

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15.09. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Chemical Name	CAS Number	List	Status
Water	7732-18-5	DSL	Present
Hydrogen Sulfide	7783-06-4	DSL	Present

15.10. United States of America Toxic Substances Control Act (TSCA) List

Chemical Name	CAS Number	Status
Water	7732-18-5	Present [XU] (ACTIVE)
Hydrogen Sulfide	7783-06-4	Present (ACTIVE)

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Chemical Name	CAS Number	List	Number
Water	7732-18-5	EINECS	231-791-2
Hydrogen Sulfide	7783-06-4	EINECS	231-977-3

15.12. China - Inventory of Existing chemical Substances (IECSC)

Chemical Name	CAS Number	Status
Water	7732-18-5	Present [32224]
Hydrogen Sulfide	7783-06-4	Present [22934]

15.13. Korea - Existing Chemicals Inventory (KECI/KECL)

Chemical Name	CAS Number	List	Status
Water	7732-18-5	Annex 1	Present [KE-35400]
Hydrogen Sulfide	7783-06-4	Annex 1	Present [KE-20209]

15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

Chemical Name	CAS Number	MITI No.
Water	7732-18-5	- (listed on Japanese Pharmacopoeia 8th Edition)
Hydrogen Sulfide	7783-06-4	(1)-434

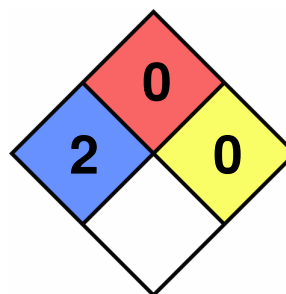
SECTION 16: Other Information

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16.1 National Fire Protection Associate (NFPA) Rating

Health: 2
Flammability: 0
Reactivity 0
Special Hazard:



16.2 Document Revision

Last Revision Date:
2026-05-22

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.