

Material Safety Data Sheet

Chlorine Water-Saturated Solution At 20°C

ACC# 04652

Section 1 - Chemical Product and Company Identification

MSDS Name: Chlorine Water-Saturated Solution At 20°C**Catalog Numbers:** S72587, S72590, SC70-1**Synonyms:** None**Company Identification:**

Fisher Scientific

1 Reagent Lane

Fair Lawn, NJ 07410

For information, call: 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7732-18-5	Water	99.2-99.	231-791-2
7782-50-5	Chlorine	0.3-0.8	231-959-5

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: pale-yellow liquid.

Danger! Corrosive. Causes eye and skin burns. Causes digestive and respiratory tract burns. Harmful if inhaled.**Target Organs:** Respiratory system, eyes, skin.**Potential Health Effects****Eye:** Causes eye burns. May cause irreversible eye injury. May cause painful sensitization to light. May cause conjunctivitis.**Skin:** Causes skin burns. May cause photosensitive skin reactions in certain individuals.**Ingestion:** May cause circulatory system failure. Causes severe digestive tract burns with abdominal pain, vomiting, and possible death. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.**Inhalation:** Harmful if inhaled. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma. May cause pulmonary edema and severe respiratory disturbances.**Chronic:** Prolonged or repeated skin contact may cause dermatitis. Repeated exposure may cause erosion

of teeth. May cause conjunctivitis and

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure. Remove contaminated clothing and shoes.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.

Storage: Keep away from heat and flame. Do not store near combustible materials. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Water	none listed	none listed	none listed
Chlorine	0.5 ppm TWA; 1 ppm STEL	10 ppm IDLH	1 ppm Ceiling; 3 mg/m ³ Ceiling

OSHA Vacated PELs: Water: No OSHA Vacated PELs are listed for this chemical. Chlorine: 0.5 ppm TWA; 1.5 mg/m³ TWA

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: pale-yellow

Odor: chlorine-like

pH: 1.734

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: >1 (ether=1)

Viscosity: Not available.

Boiling Point: Decomposes.

Freezing/Melting Point: 0 deg C

Decomposition Temperature: Not available.

Solubility: Soluble in water.

Specific Gravity/Density: 1.02

Molecular Formula: Not available.

Molecular Weight: Not available.

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, combustible materials.

Incompatibilities with Other Materials: Strong oxidizing agents, strong reducing agents, active metals, ammonia, organic matter.

Hazardous Decomposition Products: Hydrogen chloride, hydrogen gas.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 7732-18-5: ZC0110000

CAS# 7782-50-5: FO2100000

LD50/LC50:

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg;

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CAS# 7782-50-5:

Inhalation, mouse: LC50 = 137 ppm/1H;

Inhalation, mouse: LC50 = 368 mg/m³/30M;

Inhalation, rat: LC50 = 293 ppm/1H;

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Carcinogenicity:

CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7782-50-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: No information available.

Neurotoxicity: No information available.

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: No information found.

Physical: No information found.

Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	CORROSIVE LIQUIDS, N.O.S.	CORROSIVE LIQUID NOS (HYDROCHLORIC ACID)
Hazard Class:	8	8
UN Number:	UN1760	UN1760
Packing Group:	II	III

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 7732-18-5 is listed on the TSCA inventory.

CAS# 7782-50-5 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 7782-50-5: 10 lb final RQ; 4.54 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 7782-50-5: 100 lb TPQ

SARA Codes

CAS # 7782-50-5: immediate, delayed.

Section 313

This material contains Chlorine (CAS# 7782-50-5, 0.3-0.8%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 7782-50-5 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

CAS# 7782-50-5 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

CAS# 7782-50-5 is considered highly hazardous by OSHA.

STATE

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 7782-50-5 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations**European Labeling in Accordance with EC Directives****Hazard Symbols:**

C

Risk Phrases:

R 34 Causes burns.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28A After contact with skin, wash immediately with plenty of water

WGK (Water Danger/Protection)

CAS# 7732-18-5: No information available.

CAS# 7782-50-5: 2

Canada - DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 7782-50-5 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of E.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 7782-50-5 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information
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MSDS Creation Date: 11/25/1998**Revision #5 Date:** 11/08/2007

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.