SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

Issuing Date: 15-Aug-2025 **Revision Date:** 15-Aug-2025 **Version:** 5

1. Identification

Product identifier
Product Name Chlorine - EPA Reg. No. 7870-2

Other means of identification
Product Code 4800
UN/ID No UN1017
EPA Pesticide Registration Number 7870-2

Recommended use of the chemical and restrictions on use
Recommended Use Pesticide
Restrictions on Use Do not use in a manner inconsistent to the label instructions.

Details of the supplier of the safety data sheet
Manufacturer Address
Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
(612) 331-6910

E-mail SDS@hawkinsinc.com for SDS questions. All others contact customer.service@hawkinsinc.com
Emergency Telephone: CHEMTREC: 1-800-424-9300 (US) / +1 703-741-5970 (International)

2. Hazard(s) identification

Classification of the substance or mixture

Oxidizing gases	Category 1
Gases under pressure	Liquefied gas
Acute toxicity - Inhalation (Gases)	Category 2
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

Category 3 Target organ effects: Respiratory irritation.

Hazards not otherwise classified (HNOC)
Contact with product may cause frostbite

Label elements

Danger

Hazard statements
May cause or intensify fire; oxidizer.
Contains gas under pressure; may explode if heated.
Fatal if inhaled.
Corrosive to the respiratory tract.
Causes severe skin burns and eye damage.
May cause respiratory irritation.

Precautionary Statements - Prevention
Do not breathe dust.
Use only outdoors or in a well-ventilated area.
Wear respiratory protection.
Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves, protective clothing, eye protection and face protection.
Keep/Store away from clothing and other combustible materials.
Keep reduction valves/valves and fittings free from oil and grease.

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.
Call a POISON CENTER or doctor if you feel unwell.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
In case of fire: Stop leak if safe to do so.

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Protect from sunlight.

Precautionary Statements - Disposal
Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable.

Hazards classified under paragraph (d)(1)(ii) of 1910.1200 No information available.

Conditions	Chemical hazard classification	Category
Exposure to Water (>150 ppm)	Corrosive to metals Acute toxicity - Oral Acute toxicity - Inhalation (Dusts/Mists) Skin corrosion/irritation Serious eye damage/eye irritation Specific target organ toxicity (single exposure)	Category 1 Category 4 Category 4 Category 1A Category 1 Category 3 - Respiratory Tract Irritation
Exposure to Oil, Grease, or Solvent	Explosives	Classification not possible
Evaporation leading to concentration of Nitrogen Trichloride impurity	Oxidizing liquids Acute toxicity - Inhalation (Dusts/Mists) Serious eye damage/eye irritation Specific target organ toxicity (single exposure) Hazards not otherwise classified (HNOC)	Classification not possible Category 1 Category 2 Category 3 Respiratory tract irritation May cause an explosion under conditions of shock or friction or heat
Chlorine in contact with steel and heated above 300◦F (149◦C) or welded	Flammable gases (metal/chlorine fire)	Classification not possible

Other Information
Severe, short-term exposures may cause long-lasting respiratory effects, e.g. Reactive Airways Dysfunction (RADS), due to the material's severe irritating properties. Very toxic to aquatic life with long lasting effects.

3. Composition/information on ingredients

Substance

Chemical name	CAS No.	Weight-%
Chlorine	7782-50-5	>=99.5

Any concentration shown as a range is due to batch variation or the exact percentage has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice Immediate medical attention is required. Remove to fresh air. Do not breathe gas. Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately. Pulmonary edema may be delayed 24-78 hrs. Dangerous to life or health at 10 ppm.

Eye contact In case of contact with substance, immediately flush eyes with running water for at least 30 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.

Skin contact In case of contact with liquefied gas, thaw frosted parts with lukewarm water. Wash off immediately with plenty of water for at least 15 minutes. Remove and isolate contaminated clothing and shoes. Get immediate medical attention.

Ingestion Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe vapor or mist. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms Coughing and/ or wheezing. Difficulty in breathing. Burning. May cause redness and tearing of the eyes. May cause blindness. Potential frostbite.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Severe, short-term exposures may cause long-lasting respiratory effects, e.g. Reactive Airways Dysfunction (RADS), due to the material's severe irritating properties.

5. Fire-fighting measures

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire DO NOT GET WATER INSIDE CONTAINERS.

Unsuitable extinguishing media DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

Specific hazards arising from the chemical Reacts explosively or forms explosive compounds with many chemicals. Capable of supporting combustion of many substances. DO NOT GET WATER INSIDE CONTAINERS. Corrosive hydrochloric acid will form on contact with water. Water spray on active leak will promote accelerated corrosion of container and accelerate rate of leakage. Collect contaminated fire extinguishing water and do not discharge into drains. Intense local heat (>300◦F / 149◦C) causes steel and other metals to ignite product which may result in cylinder rupture. Containers may explode when heated. Damaged cylinders should be handled only by specialists. Ruptured cylinders may rocket. Most vapors are heavier than air. Vapors may spread along ground and collect in low or confined areas (sewers, basements, tanks). The product causes burns of eyes, skin and mucous membranes.

Hazardous combustion products Hydrogen chloride (HCl). Hypochlorous acid.

Explosion Data
Sensitivity to mechanical impact Yes.
Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Vapors are heavier than air. Vapors may spread along ground and collect in low or confined areas (sewers, basements, tanks). Contents under pressure. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Do not breathe vapor or mist. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Attention! Corrosive material.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

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

Methods for cleaning up Call/contact emergency personnel (Chemtrec 1-800-424-9300). As an immediate precautionary measure, isolate spill or leak area. Keep unauthorized personnel away.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Contents under pressure. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers. Close valve after each use and when empty. Keep reduction valves/valves and fittings free from oil and grease. Never attempt to lift a cylinder by its valve protection cap. Never insert an object (e.g. wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage valve, causing leak to occur. Valve protection caps must remain in place unless container is secured with valve outlet piping to use point. Do not drop, drag, slide, or roll cylinders on their sides. Use a suitable hand truck or move cylinders. Use a pressure reducing regulator when connecting container to piping or systems. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not breathe vapor or mist. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not breathe vapor or mist. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and

wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing must not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep at temperatures below 70°C / 158°F. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Protect from sunlight. Keep away from heat. Store locked up. Store away from other materials. Keep out of the reach of children. Regularly inspect and test piping and containers used for chlorine service. Liquid chlorine lines must have suitable expansion chambers between block valves due to high coefficient of expansion. Keep valves and fittings free from grease and oil. Hawkins, Inc. recommends the storage/handling of chlorine be in accordance with AWWA B301 - Liquid Chlorine.

Incompatible materials Metals. Titanium. Metal hydrides. Metal hydroxides. Nitrides. Phosphides. Reacts with most organic and inorganic compounds. Alcohols. Ether. Carbides. Sulfides. Oxidizing agent. Acids. Bases. Hydrogen gas. Reducing agent. Ammonia.

8. Exposure controls/personal protection

Control Parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Chlorine 7782-50-5	TWA: 0.1 ppm STEL: 0.4 ppm	(vacated) TWA: 0.5 ppm (vacated) TWA: 1.5 mg/m^3 (vacated) STEL: 1 ppm (vacated) STEL: 3 mg/m^3 Ceiling: 1 ppm Ceiling: 3 mg/m^3	Ceiling: 0.5 ppm 15 min Ceiling: 1.45 mg/m^3 15 min IDLH: 10 ppm

Note See section 16 for terms and abbreviations.

Other information on limit values Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Biological occupational exposure limits This product, as supplied, contains materials that do not have reportable biological exposure limits or are not subject to the reporting requirements of the local jurisdiction.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Face protection shield. Tight sealing safety goggles.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Chemical resistant apron. Antistatic boots. Long sleeved clothing.

Respiratory protection Use appropriate respiratory protection.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid Gas
Appearance:	Clear
Color:	Amber color, vaporizes to greenish, yellow gas
Odor (includes odor threshold)	Sharp, Pungent 0.06ppm (detection); 0.2 ppm (perception)

Property	**Values**	**Remarks • Method**
Melting Point/Freezing Point:	-101 °C / -149.8 °F	
Boiling point (or initial boiling point or boiling range)	-35 °C / -31 °F	
Flammability (solid, gas)	No data available	
Flammability Limits in Air:		
Upper Flammability Limit:	No data available	
Lower Flammability Limit:	No data available	
Flash Point:	No data available	
Autoignition Temperature:	No data available	
Value	No data available	
SADT (°C)	No data available	
pH		Acidic when mixed with water
pH (as aqueous solution)	No data available	
Kinematic Viscosity:	No data available	
Dynamic Viscosity:	No data available	
Solubility	Soluble in dimethylformamide, disulfur dichloride, benzene, chloroform, carbon tetrachloride, hexachlorobutadiene, tetrachloroethane, pentachloroethane, chlorobenzene, nitrobenzene, glacial acetic acid (99.84%) and other chlorides.	
Water solubility	Slightly soluble	
Partition coefficient n-octanol/water (log value)	No data available	
Vapor pressure (includes evaporation rate)	4788 mmHg	at 20◦C
Evaporation Rate (BuAc=1):	No data available	
Density and/or relative density	No data available	
Bulk Density:	No data available	
Liquid Density	1401.97g/Liter @ 15.6°C	
Vapor density (Air =1)	2.49	@ 0◦C
Particle characteristics		
Particle Size	No data available	
Particle Size Distribution	No data available	

Other information

Gases under pressure

Critical Temperature °C	143.75◦C

Other safety characteristics

Sensitivity to mechanical impact	Yes

10. Stability and reactivity

Reactivity	Oxidizer. Corrosive on contact with water.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Dry chlorine burns spontaneously on contact with titanium. Reacts with most metals at high

temperatures (>=300◦F / 149◦C) or in the presence of moisture. Chlorine will ignite in steel container if container heated above 300◦F. Always empty and flush any metal container before welding. Reacts with water to form corrosive acidic solution (hydrochloric acid). May react explosively with organic matter. Mixtures with 4-93% hydrogen will explode if in direct sun or other ultraviolet light or if exposed to static electricity or a sharp impact. Chlorine will combine with carbon monoxide and sulfur dioxide to form phosgene and sulfuryl chloride; which will hydrolyze to hydrochloric acid and sulfuric acids. Metal halides, carbon, finely divided metals and sulfides can accelerate the rate of chlorine reactions.

Conditions to Avoid: Temperatures above 149 °C / 300 °F. Exposure to water. All forms of contamination.

Incompatible materials Metals. Titanium. Metal hydrides. Metal hydroxides. Nitrides. Phosphides. Reacts with most organic and inorganic compounds. Alcohols. Ether. Carbides. Sulfides. Oxidizing agent. Acids. Bases. Hydrogen gas. Reducing agent. Ammonia.

Hazardous decomposition products Hydrogen chloride (HCl). Hypochlorous acid.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Fatal if inhaled. Corrosive by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye contact Causes serious eye damage. Corrosive to the eyes and may cause severe damage including blindness. May cause irreversible damage to eyes.

Skin contact Corrosive. Causes burns.

Ingestion Causes burns. Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Coughing and/ or wheezing. Difficulty in breathing. Redness. Burning. May cause blindness. Potential frostbite.

Acute toxicity Fatal if inhaled

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Chlorine 7782-50-5	= 5800 mg/kg (Rat)	-	= 293 ppm (Rat) 1 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious eye damage. Causes burns.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Based on available data, the classification criteria are not met.
The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Chlorine 7782-50-5	A4 - Not classifiable as a human carcinogen	-	-	-

Reproductive toxicity No information available.

STOT - single exposure May cause respiratory irritation.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Other Adverse Effects: No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Chlorine 7782-50-5	-	LC50: =0.44mg/L (96h, Lepomis macrochirus) LC50: =0.014mg/L (96h, Oncorhynchus mykiss) LC50: 0.104 - 0.168mg/L (96h, Oncorhynchus mykiss) LC50: =0.08mg/L (96h, Pimephales promelas) LC50: =0.1mg/L (96h, Pimephales promelas)	-	LC50: =0.017mg/L (48h, Daphnia magna)

Persistence and Degradability: No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number (product as supplied) D001.

14. Transport information

DOT

UN/ID No	UN1017
Proper shipping name	Chlorine
Hazard Class	2.3
Subsidiary Class	8
Subsidiary Class 2	5.1
Description	UN1017, CHLORINE, 2.3 (8, 5.1), POISON INHALATION HAZARD ZONE B, MARINE POLLUTANT

15. Regulatory information

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA Complies

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Chlorine	7782-50-5	Present	Active

DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies
TCSI	Complies

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
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical

or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Chlorine - 7782-50-5	1.0

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Chlorine - 7782-50-5	10 lb	-	-	X

CAA (Clean Air Act)
This product contains the following substances which are regulated pollutants to the Clean Air Act (CAA).

Chemical name	Hazardous air pollutants (HAPs)	Ozone-depleting substances (ODS)
Chlorine - 7782-50-5	Present	-

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA Extremely Hazardous Substances TPQ
Chlorine - 7782-50-5	10 lb / 4.54 kg (final RQ)	10 lb	100 lb TPQ

OSHA - Process Safety Management - Highly Hazardous Chemicals
This product contains one or more substances regulated under Process Safety Management (29 CFR 1910.119).

Chemical name	OSHA - Process Safety Management - Highly Hazardous Chemicals
Chlorine 7782-50-5	1500 lb TQ

US State Regulations

California Proposition 65
This product is not known to contain any Proposition 65 chemicals at or above detection limits

U.S. EPA Label Information

EPA Pesticide Registration Number 7870-2

EPA Statement This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA Pesticide Label Danger
Poison
Fatal if inhaled or absorbed through the skin. Corrosive. Causes irreversible eye damage and skin burns.

Toxic or highly toxic to fish and aquatic invertebrates.
Corrosive to most metals in the presence of moisture.

16. Other information

NSF/ANSI/CAN 60 Certification

Maximum Use (mg/L unless otherwise indicated): 30

NFPA **Health hazards** 4 **Flammability** 0 **Instability** 0 **Special hazards** OX

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	American Conference of Governmental Industrial Hygienists
ATE	Acute Toxicity Estimate
Ceiling	Maximum limit value
DOT	Department of Transportation (United States)
EPA	U.S. Environmental Protection Agency
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program (United States)
OEL	Occupational exposure limits
OSHA	Occupational Safety and Health Administration of the US Department of Labor
PPE	Personal protective equipment
SADT	Self-Accelerating Decomposition Temperature
STEL	Short Term Exposure Limit
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
VOC	Volatile organic compounds

Prepared By: Product Compliance Department
Issuing Date 15-Aug-2025
Revision Date: 15-Aug-2025
Revision Note: Format change. Reviewed and Re-issued.

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

UN1017, RQ
CAS No. 7782-50-5
CHLORINE
LIQUIFIED GAS UNDER PRESSURE
NONFLAMMABLE

FOR USE AS A DISINFECTANT AND ALGAECIDE from larger stationary cylinders (1-ton and 150 lb.), by experienced personnel only, in municipal water supplies, sewage and water management plants, and in commercial and industrial swimming pools; and as a slimicide in water cooling systems and in paper mills. This product cannot be transferred to portable cylinders for providing a pesticidal service under this registration number. Pool service operators who service swimming pools with portable cylinders must obtain their own registration with EPA. Repackagers and reformulators must obtain their own registration with EPA.

ACTIVE INGREDIENT:	
Chlorine:	99.5%
OTHER INGREDIENTS:	0.5%
Total:	100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER

("danger", graphic, and "poison" will be printed in RED)

POISON

FATAL IF INHALED
LIQUID CAUSES SEVERE BURNS.

EPA REG. NO. 7870-2 EPA EST. NO. 7870-MN-3

NET WT.: LBS.

HAWKINS, INC.
3100 E. HENNEPIN AVE.
MINNEAPOLIS, MN 55413
(612) 331-6910

Meets ANSI/AWWA B301

ACCEPTED
Jan 26, 2022
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 7870-2

PRECAUTIONARY STATEMENTS

ROUTE OF EXPOSURE	FIRST AID
IF INHALED	If inhaled, move person to fresh air and get medical attention immediately. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. If breathing is difficult, oxygen should be administered by qualified personnel. Call poison control center or medical physician for treatment advice.
IF ON SKIN OR CLOTHING **(CONTACT WITH LIQUID CHLORINE)**	In case of skin contact, immediately flush skin with plenty of water for at least 30 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Destroy contaminated shoes.
IF ON SKIN OR CLOTHING **(CONTACT WITH GASEOUS CHLORINE)**	In case of skin contact, immediately flush skin with plenty of water for at least 30 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Destroy contaminated shoes.
IF SWALLOWED	If swallowed, call poison control center or medical physician immediately for treatment advice. Have the product label with you when calling or going for medical treatment. Have exposed person sip a glass of water if able to swallow. DO NOT INDUCE VOMITING unless told to do so by a poison control center or medical physician. DO NOT give anything by mouth to an unconscious person.
IF IN EYES	In case of eye contact, immediately flush eyes with plenty of water for at least 30 minutes. Remove contact lenses, if present, after the first 5 minutes then continue rinsing eyes. Get medical attention immediately.
NOTE TO PHYSICIAN	Symptoms may become more severe up to 36 hours after exposure including pulmonary edema. Probable mucosal damage may contraindicate the use of gastric lavage.
HAVE THE PRODUCT CONTAINER OR LABEL WITH YOU WHEN CALLING A POISON CONTROL CENTER OR MEDICAL PHYSICIAN, OR GOING FOR TREATMENT.	

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: Fatal if inhaled or absorbed through the skin. Corrosive. Causes irreversible eye damage and skin burns. Do not breathe vapors or get in eyes, on skin or clothing. Wear goggles, protective clothing and rubber gloves as discussed below. Wash hands thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothing and wash clothing before reuse. Prolonged frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment requirements will vary depending on how the chlorine is being used. Refer to Chlorine Institute Pamphlet # 65 for specific recommendations. Applicators and other handlers must wear long-sleeved shirts, long pants, shoes and socks.

In Case of Spill or Leakage: Under normal use conditions, no protective eyewear, respirator, or gloves are required. However, in case of a leak, handlers must wear chemical-resistant gloves (such as any waterproof material) and a full-face canister-style (gas-mask) respirator with a canister approved for chlorine (MSHA/NIOSH approved number prefix TC-14G). Since there is always the possibility of a leak, gloves and a respirator of a type specified above must be available. Gloves and respirator are required for anyone entering into an affected area in the event of a leak.

ENVIRONMENTAL HAZARDS

This pesticide is toxic or highly toxic to fish and aquatic invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL & CHEMICAL HAZARDS:

Chlorine is a non-flammable gas, liquefied, under pressure. Do not drop cylinder. Keep away from intense heat or open sunlight. Corrosive to most metals in the presence of moisture.

DIRECTIONS FOR USE:
GENERAL CLASSIFICATION

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Before working with this product, handlers must be trained how to appropriately handle and use chlorine. Use only in well ventilated areas.

Refer to the appropriate Chlorine Institute Pamphlet for instructions on the required product use and safety procedures. NEVER TAMPER WITH FUSIBLE PLUGS OR ATTEMPT TO ALTER OR REPAIR CYLINDERS, TONS OR VALVES. This product, including dispensing equipment, must be handled and used in accordance with the practices specified by all applicable product labeling and the appropriate Chlorine Institute Pamphlet.

To contact the Chlorine Institute, call (703)-894-4140 or visit its website at www.chlorineinstitute.org.

Chlorine Manual	CI Pamphlet #1
Piping Systems	CI Pamphlet #6
Chlorine Packaging Plants	CI Pamphlet #17
Cargo Tank Handling	CI Pamphlet #49
Emergency Response	CI Pamphlet #64
Personal Protective Equipment	CI Pamphlet #65
Railcar Handling	CI Pamphlet #66
Cylinders at Swimming Pools	CI Pamphlet #82
Swimming Pool Applicators	CI Pamphlet #97
Potable Water Treatment	CI Pamphlet #155
Wastewater Treatment	CI Pamphlet #155

STORAGE & DISPOSAL

Do not contaminate water, food or animal feed by storage or disposal.

STORAGE: Cylinders and ton containers of chlorine should be stored in a dry area away from sources of heat and protected from direct sunlight and precipitation. Cylinders must not be stored where they will be exposed to temperatures warmer than 54.5°C (130°F). The should be segregated from other compressed gases and never stored near hydrocarbons, finely divided metals, turpentine, ether, anhydrous ammonia or other flammable materials. All storage containers must have a weather resistant label and must not be accessible to the general public.

DISPOSAL OF CONTAINER: All chlorine containers are returnable and should be properly identified with return tags and returned as promptly as possible to the supplier according to prescribed instructions and practices recommended by the Chlorine Institute. All valves must be closed tight and closures or caps secured. It is illegal to ship a leaking chlorine cylinder.

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

DO NOT STORE IN DIRECT SUNLIGHT
DO NOT DROP CYLINDER

Empty Packages Contain Dangerous Chlorine Gas Residue
Always Return Empty Cylinder with Valve Protective Hood.

CHLORINE, 2.3 (8), UN1017, POISON-INHALATION HAZARD ZONE B, RQ