

1. Identification

Other means of identification None known.
Product identifier **CHLORINE**
Other means of identification
CAS number 7782-50-5
Recommended use ALL PROPER AND LEGAL PURPOSES
Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Brenntag Southwest, Inc.
Address 610 Fisher Road
 Longview, TX 75604
Telephone 903-759-7151
E-mail Not available.

Emergency phone number 800-424-9300 CHEMTREC

2. Hazard(s) identification

Physical hazards Oxidizing gases Category 1
 Gases under pressure Liquefied gas
Health hazards Acute toxicity, inhalation Category 2
 Skin corrosion/irritation Category 1
 Serious eye damage/eye irritation Category 1
 Specific target organ toxicity, single exposure Category 3 respiratory tract irritation
 Specific target organ toxicity, repeated exposure Category 2
Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement May cause or intensify fire; oxidizer. Contains gas under pressure; may explode if heated. Causes severe skin burns and eye damage. Causes serious eye damage. Fatal if inhaled. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure.

Precautionary statement

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

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. 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/doctor. Specific treatment is urgent (see this label). Wash contaminated clothing before reuse. In case of fire: Stop leak if safe to do so.

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

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

100% of the substance consists of component(s) of unknown acute oral toxicity. 100% of the substance consists of component(s) of unknown acute dermal toxicity.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
CHLORINE		7782-50-5	100

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.

Skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

Not likely, due to the form of the product. Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

Headache. Dizziness. Nausea, vomiting. Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Coughing. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Greatly increases the burning rate of combustible materials. Containers may explode when heated. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

Allow gas to burn if flow cannot be shut off immediately. Apply water from safe distance to cool container and protect surrounding area. In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Move containers from fire area if you can do so without risk. Do not direct water at source of leak or safety devices as icing may occur. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

Contents under pressure. Pressurized container may explode when exposed to heat or flame. May cause or intensify fire; oxidizer.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Stop leak if you can do so without risk. Extinguish all flames in the vicinity. If this gas leaks without igniting, extreme caution must be used; flammable or explosive mixtures with air may be formed. Use water spray to reduce vapors or divert vapor cloud drift. Isolate area until gas has dispersed.

Large Spills: Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Runoff from fire control or dilution water may cause pollution.

7. Handling and storage

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Keep away from combustible material. Keep reduction valves free from grease and oil. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Suck back of water into the container must be prevented. Do not allow backfeed into the container. Purge air from system before introducing gas. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Do not breathe mist/vapors. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Do not store near combustible materials. Stored containers should be periodically checked for general condition and leakage. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value
CHLORINE (CAS 7782-50-5)	Ceiling	3 mg/m ³
		1 ppm

US. ACGIH Threshold Limit Values

Material	Type	Value
CHLORINE (CAS 7782-50-5)	STEL	0.4 ppm
	TWA	0.1 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
CHLORINE (CAS 7782-50-5)	Ceiling	1.45 mg/m ³
		0.5 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

The following are recommendations for Personnel Protective Equipment (PPE). The employer/user of this product must perform a Hazard Assessment of the workplace according to OSHA regulations 29 CFR 1910.132 to determine the appropriate PPE for use while performing any task involving potential exposure to this product.

Eye/face protection Chemical respirator with organic vapor cartridge and full facepiece.
Skin protection
Hand protection Wear appropriate chemical resistant gloves.
Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece.
Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.
Form Liquid. Liquefied gas.
Color YELLOWISH-GREEN

Odor PUNGENT
Odor threshold Not available.
pH Not available.
Melting point/freezing point -150 °F (-101.11 °C)
Initial boiling point and boiling range -29.27 °F (-34.04 °C)
Flash point Not available.
Evaporation rate Not available.
Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.
Flammability limit - upper (%) Not available.
Explosive limit - lower (%) Not available.
Explosive limit - upper (%) Not available.

Vapor pressure Not available.
Vapor density 2.5
Relative density Not available.
Solubility(ies)
Solubility (water) 7 g/l
Partition coefficient (n-octanol/water) Not available.
Auto-ignition temperature Not available.
Decomposition temperature Not available.
Viscosity Not available.

Other information

Density 11.87 lbs/gal
1.42 g/ml

Explosive properties	Not explosive.
Molecular formula	Cl ₂
Molecular weight	70.91 g/mol
Oxidizing properties	May cause or intensify fire; oxidizer.
Specific gravity	1.42
Surface tension	18.4 mN/m (68 °F (20 °C))

10. Stability and reactivity

Reactivity	Greatly increases the burning rate of combustible materials.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Keep away from combustible material. Heat. Contact with incompatible materials.
Incompatible materials	Combustible material. Reducing agents. Ammonia.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Fatal if inhaled.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics Headache. Dizziness. Nausea, vomiting. Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Coughing.

Information on toxicological effects

Acute toxicity	Fatal if inhaled.
Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.
Skin sensitization	Due to partial or complete lack of data the classification is not possible.

Germ cell mutagenicity Due to partial or complete lack of data the classification is not possible.

Carcinogenicity Due to partial or complete lack of data the classification is not possible.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.
Chronic effects	May cause damage to organs through prolonged or repeated exposure.

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.

Product	Species	Test Results
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CHLORINE (CAS 7782-50-5)

Aquatic

Fish	LC50	Atlantic silverside (Menidia menidia)	0.037 mg/l, 96 hours
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Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code D001: Waste Flammable material with a flash point <140 F
D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN1017

UN proper shipping name CHLORINE RQ,MARINE POLLUTANT POISON-INHALATION HAZARD, ZONE B

Transport hazard class(es)

Class 2.3

Subsidiary risk 5.1, 8

Packing group Not available.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

ERG number 124

Transport information on packaging may be different from that listed. Transportation information on packaging may be different from that listed.

IATA

UN number UN1017

UN proper shipping name CHLORINE RQ,MARINE POLLUTANT POISON-INHALATION HAZARD, ZONE B

Transport hazard class(es)

Class 2.3

Subsidiary risk 5.1, 8

Packing group Not available.

Environmental hazards No.

ERG Code 124

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

Not regulated as dangerous goods.

DOT



IATA



General information

Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: Ensure that containers are firmly secured. Ensure cylinder valve is closed and not leaking. Ensure valve outlet cap nut or plug (where provided) is correctly fitted. Ensure valve protection device (where provided) is correctly fitted. Ensure adequate ventilation. Ensure compliance with applicable regulations.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

CHLORINE (CAS 7782-50-5) Listed.

SARA 304 Emergency release notification

CHLORINE (CAS 7782-50-5) 10 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
CHLORINE	7782-50-5	10	100		

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories

Oxidizer (liquid, solid, or gas)
 Gas under pressure
 Acute toxicity (any route of exposure)
 Skin corrosion or irritation
 Serious eye damage or eye irritation
 Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
CHLORINE	7782-50-5	100

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

CHLORINE (CAS 7782-50-5)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

CHLORINE (CAS 7782-50-5)

Clean Water Act (CWA) Hazardous substance
Section 112(r) (40 CFR 68.130)

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

CHLORINE (CAS 7782-50-5)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	05-22-2017
Revision date	08-04-2020
Version #	17
HMIS® ratings	Health: 3* Flammability: 0 Physical hazard: 3
NFPA ratings	Health: 4 Flammability: 0 Instability: 0

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