



Material Safety Data Sheet

1. Product and Company Identification

Product name : **Chlorine**

Chemical formula : CL₂

Synonyms : None

Company : Specialty Gases of America, Inc
6055 Brent Dr.
Toledo, OH 43611

Telephone : 419-729-7732

Emergency : 800-424-9300

2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Chlorine	7782-50-5	99+%

3. Hazards Identification

Emergency Overview

Poisonous, corrosive liquid and gas under pressure.
Can cause eye, skin, and respiratory tract burns.
Can support combustion.

Potential Health Effects

Inhalation : Chlorine gas can cause severe irritation of the eyes and respiratory system. May cause tearing, runny nose, sneezing, coughing, choking, and chest pain. Can also cause pneumonitis and pulmonary edema.

Eye contact : Not identified as primary route of entry.

Skin contact : In high concentrations, it may irritate the skin and eyes and cause burning, prickling, inflammation and blistering.

Ingestion : Not identified as primary route of entry.

Chronic Health Hazard : Corrosion of teeth, skin irritation.

4. First Aid Measures

General advice : None.

Eye contact : Immediately flush with copious amounts of water for at least 15 minutes.

Skin contact : Immediately flush with large amount of water for at least 15 minutes while removing contaminated clothing.

Ingestion : None.

Inhalation : Immediately remove victim to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration.

5. Fire-Fighting Measures

Suitable extinguishing media	:	Use what is appropriate for surrounding fire.
Specific hazards	:	Cylinder rupture may occur under fire conditions. Can react to cause fire and explosion when in contact with reducing agents. Flammable gases and vapors can form explosive mixtures with chlorine. Chlorine supports combustion.
Special protective equipment for fire-fighters	:	Wear self contained breathing apparatus and full protective clothing. Keep fire exposed cylinders cool with water spray. If possible, stop the product flow.

6. Accidental Release Measures

Personal precautions	:	None.
Environmental precautions	:	None.
Methods for cleaning up	:	Evacuate and ventilate area. Remove leaking cylinder to exhaust hood or safe outdoor area. Position to release gas not liquid.
Additional advice	:	None.

7. Handling and Storage

Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

Storage

Store in well ventilated areas. Keep valve protection cap on cylinders when not in use.

8. Exposure Controls / Personal Protection

Engineering measures

Provide adequate general and local exhaust ventilation to maintain concentrations below exposure limits.

Personal protective equipment

Respiratory protection	:	Use a self-contained breathing apparatus in case of leakage.
Hand protection	:	Impervious gloves.
Eye protection	:	Safety glasses. A safety shower and eyewash station should be readily available.
Skin and body protection	:	Coveralls, boots, and/or other resistant protective clothing.
Remarks	:	None.

9. Physical and Chemical Properties

Form	:	Gas.
Color	:	Green.
Odor	:	Suffocating pungent odor.
Vapor pressure	:	6.3 atm @ 20 C
Vapor density	:	2.473 (Air = 1)
Boiling point (C)	:	-34 C
Water solubility	:	4.61 (cm ³ /cm ³ H ₂ O)
Specific gravity	:	Gas.
Evaporation rate	:	Gas.

10. Stability and Reactivity

Stability	: Stable under normal conditions.
Conditions to avoid	: Storage in poorly ventilated areas. Storage near a heat source.
Materials to avoid	: Chlorine reacts with reducing agents and combustibles. Materials such as acetylene, turpentine, hydrocarbons, ammonia, hydrogen, ether, powdered metals, etc. must be kept away.
Hazardous decomposition products	: Chlorine will react with steam and water to give HCl fumes. Material combines with CO and CO ₂ from phosgene and sulfuryl chloride.

11. Toxicological Information

Toxicity Data

LC50 1 hr, rat = 293 ppm.

Acute Health Hazard

Ingestion	: Not available.
Inhalation	: Not available.
Skin	: Not available.

12. Ecological Information

No adverse ecological effects are expected.

13. Disposal Considerations

Waste from residues / unused products	: Dispose of non-refillable cylinders in accordance with federal, state and local regulations. Allow gas to vent slowly to atmosphere in an unconfined area or exhaust hood. If the cylinders are refillable type, return cylinders to supplier with any valve outlet plugs or caps secured and valve protection caps in place. Allow gas to discharge at a moderate rate.
Contaminated packaging	: Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name	: Chlorine
Class	: 2.3, Hazard Zone B
UN/ID No.	: UN1017
Labeling	: Poison gas, Corrosive
Reportable quantities	: 10 lb

Further information

Cylinders should be transported in a secure upright position in a well ventilated truck.

15. Regulatory Information

OSHA Hazard Communication Standard (29 CFR 1910.1200) Hazard Class(es)

Material is listed in appendix A of 29 CFR 1910.119 as highly hazardous chemical.

TCSA

Material is listed in TSCA inventory.

SARA

The threshold planning quantity for material is 100 lbs.

Number in Annex 1 of DIR 67/548

Not listed in annex 1.

16. Other Information

Prepared by : Specialty Gases of America, Inc.

For additional information, please visit our website at www.americangasgroup.com.