Material Safety Data Sheet

1. Product and Company Identification

Product name : **Cyanogen Chloride, Inhibited**

Chemical formula : C-N-CL

Synonyms : Cyanogen Chloride ((CN)CL); Chlorine Cyanide; Chlorine Cyanide (CLCN); Chlorocyan; Chlorocyanide; Chlorocyanide (CLCN); Chlorocyanogen; Cyanochloride (CNCL); Cyanogen Chloride (CLCN)

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
Cyanogen Chloride, Inhibited	506-77-4	< 99%
Water	7732-18-5	> 0.9%

3. Hazards Identification

Emergency Overview

Potentially fatal if swallowed, harmful if inhaled, respiratory tract burns, skin burns, eye burns, mucous membrane burns.
Flammable gas. May cause flash fire. Containers may rupture or explode if exposed to heat.

Potential Health Effects

Inhalation : Burns, tearing, nausea, difficulty breathing, headache, dizziness, lung congestion.
Eye contact : Burns, tearing, blurred vision.
Skin contact : Burns, bluish skin color.
Ingestion : Burns, sore throat, nausea, vomiting, diarrhea, stomach pain, difficulty breathing, bluish skin color, death.
Chronic Health Hazard : Not applicable.

4. First Aid Measures

General advice : None.
Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.
Skin contact : Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Ingestion	:	Contact local poison control center or physician immediately. Never make an unconscious person vomit or drink fluids. When vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.
Inhalation	:	When safe to enter area, remove from exposure. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Get medical attention immediately.

5. Fire-Fighting Measures

Suitable extinguishing media	:	Carbon dioxide, regular dry chemical. Large fires: Use regular foam or flood with fine water spray.
Specific hazards	:	Negligible fire hazard. Containers may rupture or explode if exposed to heat.
Fire fighting	:	Do not get water inside container. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Keep unnecessary people away, isolate hazard area and deny entry.

6. Accidental Release Measures

Personal precautions	:	None.
Environmental precautions	:	Air release – Reduce vapors with water spray. Collect runoff for disposal as potential hazardous waste. Soil release – Dig holding area such as lagoon, pond or pit for containment. Dike for later disposal. Absorb with sand or other non-combustible material. Water release – Add an alkaline material (lime, crushed limestone, sodium bicarbonate, or soda ash). Add an oxidizing agent.
Methods for cleaning up	:	Stop leak if possible without personal risk. Reduce vapors with water spray. Do not get water directly on material. Do not get water inside container. Keep unnecessary people away, isolate hazard area and deny entry. Small spills: Flood with water. Large spills: Dike for later disposal. Stay upwind and keep out of low areas. Ventilate closed spaces before entering. Evacuation radius: 150 feet. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 or (202)426-2675 (USA).
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 accordance with all current regulations and standards. Subject to storage regulation: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

8. Exposure Controls / Personal Protection

Exposure limits

0.3 ppm (0.6 mg/m3) OSHA ceiling (vacated by 58 FR 35338, June 30, 1993)
0.3 ppm ACGIH ceiling
0.3 ppm (0.6 mg/m3) NIOSH recommended ceiling

Engineering measures

Not available.

Personal protective equipment

Respiratory protection	:	Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use. Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode. Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. For unknown concentrations or immediately dangerous to life or death – Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
Hand protection	:	Wear appropriate chemical resistant gloves.
Eye protection	:	Eye protection is not required, but recommended.
Skin and body protection	:	Protective clothing is not required.
Ventilation	:	Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

9. Physical and Chemical Properties

Form	:	Liquefied gas.
Color	:	Colorless.
Odor	:	Irritating odor.
Molecular weight	:	61.47
Vapor pressure	:	1000 mmHg @ 2 C
Vapor density	:	2.1 (air = 1)
Specific gravity	:	1.186 (water = 1)
Boiling point	:	55 F (13 C)
Freezing point	:	21 F (-6 C)
Water solubility	:	Soluble.

10. Stability and Reactivity

Stability	:	Contact with water or moist air may form flammable and/or toxic gases or vapors.
Conditions to avoid	:	Minimize contact with material. Avoid inhalation of material or combustion by-products. Containers may rupture or explode if exposed to heat.
Materials to avoid	:	Acids.
Hazardous decomposition products	:	Thermal decomposition products: Cyanides, hydrochloric acids, oxides of carbon, nitrogen.

11. Toxicological Information

Toxicity Data

6 mg/kg oral-cat LD50.

Acute Health Hazard

Ingestion	:	Highly toxic.
Inhalation	:	Not available.

Skin : Not available.

12. Ecological Information

Ecotoxicity Data

Invertebrate toxicity : 29 ug/L 48 hour(s) LC50 (Mortality) Water flea (Daphnia magna).

13. Disposal Considerations

Waste from residues / unused products : Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): P033.

Contaminated packaging : Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name : Cyanogen Chloride, Stabilized

Class : 2.3

UN/ID No. : UN1589

Labeling : 2,3; 8

Additional shipping description : Toxic-Inhalation Hazard Zone A

Further information

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

15. Regulatory Information

OSHA Process Safety (29 CFR 1910.119) Hazard Class(es)

500 LBS TQ.

TCSA

Material is listed in TSCA inventory.

SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355.30)

Not regulated.

SARA Title III Section 304 Extremely Hazardous Substances (40 CFR 355.40)

Not regulated.

SARA Title III SARA Sections 311/312 Hazardous Categories (40 CFR 370.21)

Acute: Yes
Chronic: No
Fire: No
Reactive: No
Sudden Release: Yes

SARA Title III Section 313 (40 CFR 372.65)

Not regulated.

16. Other Information

Prepared by : Specialty Gases of America, Inc.

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