



# Scott Specialty Gases

M-22431/

SCOTT\_SPECIALTY\_GASES

MATERIAL SAFETY DATA SHEETS

DATE: 11/20/97

SUPPLIER ADDRESS: 1290 COMBERMERE STREET

TROY, MI 48083

EMERGENCY PHONE: (248) 589-2950

NUMBER

## 1. CHEMICAL PRODUCT

PRODUCT NAME: HYDROGEN CHLORIDE IN  
NITROGEN

SYNONYMS: None

## 2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient Name	Formula	CAS#	Concentration	Exposure Limits (PPM)		
				ACGIH TLV	OSHA PEL	MAC
HYDROGEN CHLORIDE	HCl	7647-01-0	.0006-10 PCT	5	5	5
NITROGEN	N2	7727-37-9	BALANCE	S/A	S/A	S/A

Note: NE = NONE ESTABLISHED

S/A = SIMPLE ASPHYXIANT

## 3. HAZARD IDENTIFICATION

### \*\*\* EMERGENCY OVERVIEW \*\*\*

Corrosive high pressure liquid and gas.

May cause liver damage.

Can cause rapid suffocation.

Can cause eye, skin, and respiratory tract burns.

### POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY: Inhalation , Skin

ACUTE EFFECTS: Inhalation of hydrogen chloride irritates nasal passages and may damage teeth. High concentrations may cause choking and may produce severe irritation and damage of mucous membranes and respiratory tract. Exposure may produce damage to the liver. Skin and eye irritation may occur. Mixture can act as a simple asphyxiant by displacing air necessary for life. Symptoms include rapid respiration, muscular incoordination, fatigue, dizziness, nausea, vomiting, unconsciousness, and death.

CHRONIC EFFECTS: None known

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: None known

OTHER EFFECTS OF OVEREXPOSURE: None

CARCINOGENICITY (US Only):

NTP - No

IARC MONOGRAPHS - No  
 OSHA REGULATED - No

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#### 4. FIRST AID MEASURES

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

EYE CONTACT: Immediately flush with copious amounts of water for at least 15 minutes.

SKIN CONTACT: Immediately flush with copious amounts of water for at least 15 minutes while removing contaminated clothing.

INGESTION: None

IN EVENT OF EXPOSURE, CONSULT A PHYSICIAN

NOTE TO PHYSICIAN: None

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#### 5. FIRE FIGHTING MEASURES

FLASH POINT: Nonflammable

AUTOIGNITION TEMPERATURE: N/Ap

FLAMMABLE LIMITS: Nonflammable

LOWER:

UPPER:

EXTINGUISHING MEDIA: Use what is appropriate for surrounding fire.

SPECIAL FIRE FIGHTING INSTRUCTION AND EQUIPMENT: Wear self-contained breathing apparatus and full protective clothing. Keep fire exposed cylinders cool with water spray.

HAZARDOUS COMBUSTION PRODUCTS: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: Cylinder rupture may occur under fire.

be detected with concentrated NH<sub>4</sub>C giving off white fumes.

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#### 7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING: Secure cylinder when using to protect from falling. Use suitable hand to move cylinders.

PRECAUTIONS TO BE TAKEN IN STORAGE: Store in well-ventilated areas. Keep valve protection cap on cylinders not in use.

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#### 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide adequate general and local exhaust ventilation to maintain concentrations below exposure limits and to avoid asphyxiation.

##### PERSONAL PROTECTION

EYE/FACE PROTECTION: Safety glasses

SKIN PROTECTION: Protective gloves

RESPIRATORY PROTECTION: In case of leakage, use self-contained breathing apparatus.

OTHER PROTECTIVE EQUIPMENT: Safety when handling cylinders.

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#### 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless

ODOR: Suffocating pungent odor.

PHYSICAL STATE: Liquefied gas.

VAPOR PRESSURE: N/Ap

VAPOR DENSITY (AIR=1): 0.966-0.995

BOILING POINT (C): N/Ap

SOLUBILITY IN WATER: Complete

SPECIFIC GRAVITY (H<sub>2</sub>O=1): Gas

conditions.

#### 6. ACCIDENTAL RELEASE MEASURES

CLEAN UP PROCEDURES: Evacuate and ventilate area. Remove leaking cylinder to exhaust hood or safe outdoor area. Shut off source if possible and remove source of heat.

SPECIALIZED EQUIPMENT: Small leaks can

MATERIALS TO AVOID: Hydrogen chloride in the presence of moisture, is corrosive to many metals and can generate flammable hydrogen gas. Galvanized pipe, brass, copper, bronze, alkaline materials, cyanides, and sulfites. Reacts exothermic (heat producing) with many organic materials. Nitrogen reacts with Li, Nd, and Ti at high temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: Hydrogen chloride emits hydrogen, chloride, and hydrochloric acid.

#### 11. TOXICOLOGICAL INFORMATION

LETHAL CONCENTRATION (LC50): 3120 ppm, Rat 1 hour. (HCl)

LETHAL DOSE 50 (LD50): N/Ap

TERATOGENICITY: N/Ap

REPRODUCTIVE EFFECTS: N/Ap

MUTAGENICITY: N/Ap

#### 12. ECOLOGICAL INFORMATION

No adverse ecological effects are expected.

#### 13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: 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 the refillable type, return cylinders to supplier with any valve outlet plugs or

EVAPORATION RATE: N/Ap

ODOR THRESHOLD: N/Av

#### 10. STABILITY AND REACTIVITY

STABILITY: Stable under normal storage conditions.

CONDITIONS TO AVOID: Storage in poorly ventilated areas. Storage near a heat source.

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

#### 15. REGULATORY INFORMATION

OSHA: Process Safety Management: This component is listed in appendix A 1910.119 as a highly hazardous chemical.

TSCA: Mixture is not listed in TSCA inventory.

SARA: The threshold planning quantity for this mixture is 10,000 lbs.

EU NUMBER: N/Ap

NUMBER IN ANNEX 1 OF DIR 67/548: This mixture is listed in annex 1.

EU CLASSIFICATION: N/Av

R: 20, 36/37/38

S: 9, 39

#### 16. OTHER INFORMATION

OTHER PRECAUTIONS: Protect container from physical damage. Do not deface cylinders or labels. Cylinders should be refilled by qualified producers of compressed gas. Shipment of a compressed gas cylinder which has not been filled by the owner or with his written consent is a violation of federal law (49 CFR 171.15).

#### ABBREVIATIONS:

N/Ap - Not Applicable

N/Av - Not Available

SA - Simple Asphyxiant

caps secured and valve protection caps  
in place.

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14. TRANSPORT INFORMATION

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CONCENTRATION: 0.0006-10%

DOT DESCRIPTION (US ONLY):

PROPER SHIPPING NAME: Compressed gases,  
n.o.s.

HAZARD CLASS: 2.2 (nonflammable)

IDENTIFICATION NUMBER: UN1956

REPORTABLE QUANTITIES: None

LABELING: NONFLAMMABLE GAS

ADR/RID (EU Only): Class 2, 1A

NE - None Established

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