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MSDS SHEETS  
FOR ORDER: 79381

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SHIP-TO ADDRESS INFORMATION

: CLEAN AIR INSTRUMENT RENTAL  
: 500 WEST WOOD STREET  
: PALATINE IL 60067

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LINE NUMBER : 003  
PRODUCT CODE : 0502H300128TAN  
DESCRIPTION : HCL, SF6 IN NITROGEN  
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AIR LIQUIDE AMERICA SPECIALTY GASES LLC

SUPPLIER ADDRESS: 1290 COMBERMERE STREET

TROY, MI 48083

EMERGENCY PHONE: (248) 589-2950  
NUMBER

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1. CHEMICAL PRODUCT

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PRODUCT NAME: HCL, SF6 IN NITROGEN

SYNONYMS: NONE

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2. COMPOSITION, INFORMATION ON INGREDIENTS

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Ingredient Name	Formula	CAS#	Concentration	Exposure Limits (PPM)			
				ACGIH TLV	OSHA PEL	MAC	Other STEL
Hydrogen Chloride	HCl	7647-01-0	6 ppm to 5000 ppm	5	5	5	NE
Sulfur Hexafluoride	SF6	2551-62-4	2 ppm to 100 ppm	1000	1000	NE	NE
Nitrogen	N2	7727-37-9	balance	S/A	S/A	S/A	S/A

Note: S/A = SIMPLE ASPHYXIANT NE = NONE ESTABLISHED

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3. HAZARD IDENTIFICATION

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\*\*\* EMERGENCY OVERVIEW \*\*\*  
Corrosive high pressure gas.  
May cause liver damage  
Can cause eye, skin and respiratory tract burns.  
Can cause rapid suffocation.

**POTENTIAL HEALTH EFFECTS**

ROUTES OF ENTRY: Inhalation

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

CARCINOGENITY (US Only):

NTP – No

IARC – No

OSHA REGULATED – No

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4. FIRST AID MEASURES

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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: If frostbite occurs, flush affected areas with lukewarm water.

# AIR LIQUIDE AMERICA SPECIALTY GASES LLC

INGESTION: None

IN EVENT OF EXPOSURE, CONSULT A PHYSICIAN

NOTE TO PHYSICIAN: None

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## 5. FIRE FIGHTING MEASURES

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FLASH POINT: Nonflammable

AUTOIGNITION TEMPERATURE: N/Ap C

FLAMMABLE LIMITS: Nonflammable

Lower:

Upper:

EXTINGUISHING MEDIA: Use what is appropriate for surrounding fire.

SPECIAL FIRE FIGHTING INSTRUCTIONS AND EQUIPMENT: Wear self-contained breathing apparatus and full protective clothing. Keep fire exposed cylinders cool with water spray. If possible, stop the product flow.

HAZARDOUS COMBUSTION PRODUCTS: Toxic carbon monoxide may be given off during combustion.

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

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## 6. ACCIDENTAL RELEASE MEASURES

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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: None

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## 7. Handling and Storage

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

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

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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ENGINEERING CONTROLS: Provide adequate general and local exhaust ventilation to maintain concentration below flammable 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 shoes when handling cylinders.

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9. PHYSICAL AND CHEMICAL PROPERTIES

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APPEARANCE: Colorless  
ODOR: Suffocating pungent odor.  
PHYSICAL STATE: Liquefied gas  
VAPOR PRESSURE: N/Ap  
BOILING POINT: N/Ap  
SPECIFIC GRAVITY: Gas  
EVAPORATION RATE: N/Ap  
ODOR THRESHOLD: N/Av

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10. STABILITY AND REACTIVITY

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STABILITY: Stable under normal storage conditions.

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

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.

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11. TOXICOLOGICAL INFORMATION

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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

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12. ECOLOGICAL INFORMATION

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No adverse ecological effects are expected.

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13. DISPOSAL CONSIDERATIONS

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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 the cylinders to the supplier with any valve outlet plugs or caps secured and valve protection caps in place.

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14. TRANSPORT INFORMATION

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CONCENTRATION: 6 ppm to 5000 ppm

DOT DESCRIPTION (US ONLY):

PROPER SHIPPING NAME: Compressed gas, N.O.S.

HAZARD CLASS: 2.2 (Nonflammable)

IDENTIFICATION NUMBER: UN1956

REPORTABLE QUANTITIES: None

LABELING: Flammable Gas

ADR / RID (EU Only): Class2, 1A

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

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15. REGULATORY INFORMATION

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OSHA: Process Safety Management: Minor component is listed in appendix A 29 CFR 1910.119 as a highly hazardous chemical.

TSCA: Material is listed in TSCA inventory.

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

EU NUMBER: N/Av

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

EU CLASSIFICATION: N/Av

R: 20, 36/37/38

S: 9, 39

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16. OTHER INFORMATION

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

ABBREVIATIONS:

N/Av – Not Applicable

N/Av – Not Available

SA – Simple Asphyxiant

NE – None Established

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