Hydrogen Cyanide: 0.0001- 0.02% in Nitrogen Balance Gas

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 04/04/2014 Date of issue: 04/04/2014 Version: 1.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

Product Identifier

Product Form: Mixture

Product Name: Hydrogen Cyanide: 0.0001- 0.02% in Nitrogen Balance Gas

SDS No: 50024

Intended Use of the Product

Calibration of Monitoring or Research Equipment

Name, Address, and Telephone of the Responsible Party

Company

Calgaz, division of Air Liquide aB&T
2700 Post Oak Blvd.
Houston, TX 77056
USA
(713) 896-2896
sds@airliquide.com
www.us.airliquide.com

Manufacturer

Air Liquide
800-819-1704

Emergency Telephone Number

Emergency number : 800-424-9300 CHEMTREC (in US); +1 703-527-3887 CHEMTREC (International and Maritime)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Simple Asphy
Compressed gas H280

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS04

Signal Word (GHS-US) : Warning

Hazard Statements (GHS-US) : H280 - Contains gas under pressure; may explode if heated
May displace oxygen and cause rapid suffocation

Precautionary Statements (GHS-US) : P410+P403 - Protect from sunlight. Store in a well-ventilated place

Other Hazards

Other Hazards Not Contributing to the Classification: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Nitrogen	(CAS No) 7727-37-9	99.98 to 99.9999	Simple Asphy Compressed gas, H280
Hydrogen cyanide	(CAS No) 74-90-8	< 0.1	Flam. Liq. 1, H224 Acute Tox. 1 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 1 (Inhalation:gas), H330 STOT SE 1, H370 STOT RE 1, H372 Aquatic Acute 1, H400

			Aquatic Chronic 1, H410

More than one of the ranges of concentration prescribed by Controlled Products Regulations has been used where necessary, due to varying composition.

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible). If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Do not use hot water. Do not rub affected area. Get immediate medical attention.

Inhalation: Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately. Keep at rest and in a position comfortable for breathing.

Skin Contact: Rinse with plenty of water. Obtain medical attention if irritation develops or persists

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Ingestion is an unlikely route of exposure for a gas.

Most Important Symptoms and Effects Both Acute and Delayed

General: Gas can be toxic as a simple asphyxiant by displacing oxygen from the air. Exposure may produce symptoms of lack of oxygen, leading to collapse and death. Compressed gases may create low temperatures when they expand rapidly. Leaks and uses that allow rapid expansion may cause a frostbite hazard.

Inhalation: In elevated concentrations may cause asphyxiation, central nervous system effects, and increased breathing rate. Symptoms of asphyxiation include headache, dizziness, rapid breathing, increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremeties, unconciousness and death.

Skin Contact: None expected under normal conditions of use.

Eye Contact: None expected under normal conditions of use.

Ingestion: None expected under normal conditions of use.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIREFIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire. In case of fire: keep cylinder cool by spraying with water.

Unsuitable Extinguishing Media: Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable. Contains gas under pressure; may explode if heated.

Explosion Hazard: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Cool closed containers exposed to fire with water spray.

Reactivity: Stable at ambient temperature and under normal conditions of use.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Do not breathe gas. Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing.

Firefighting Instructions: Stop leak if safe to do so. Use water spray or fog for cooling exposed containers. Remove containers from fire area if this can be done without risk. Fight fire from safe distance and protected location.

Protection During Firefighting: Gas can be toxic as a simple asphyxiant by displacing oxygen from the air. Do not enter fire area without proper protective equipment, including respiratory protection. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.

Hazardous Combustion Products: Nitrogen compounds.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not breathe gas. Avoid contact with the skin and the eyes. Keep away from heat, sparks, open flames, hot surfaces. No smoking.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Keep upwind.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

Environmental Precautions

Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

For Containment: Stop leak if safe to do so.

Methods for Cleaning Up: Stop the source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering. Contact competent authorities after a spill.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: Risk of explosion if heated under confinement. In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Exposed person may not be aware of asphyxiation.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Use only outdoors or in a well-ventilated area. Do no eat, drink or smoke when using this product.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling. Keep at temperatures below 52°C / 125°F.

Storage Conditions: Store tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, open flames, hot surfaces. No smoking. Keep reduction valves free from grease and oil.

Specific End Use(s)

Calibration of Monitoring or Research Equipment.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Hydrogen cyanide (74-90-8)		
Mexico	OEL Ceiling (mg/m³)	10 mg/m³
Mexico	OEL Ceiling (ppm)	9.4 ppm
USA ACGIH	ACGIH Ceiling (ppm)	4.7 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	11 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	10 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m³)	5 mg/m³
USA NIOSH	NIOSH REL (STEL) (ppm)	4.7 ppm
USA IDLH	US IDLH (ppm)	50 ppm
Alberta	OEL Ceiling (mg/m³)	5.2 mg/m³
Alberta	OEL Ceiling (ppm)	4.7 ppm
British Columbia	OEL Ceiling (ppm)	4.7 ppm
Manitoba	OEL Ceiling (ppm)	4.7 ppm
New Brunswick	OEL Ceiling (mg/m³)	5 mg/m³
New Brunswick	OEL Ceiling (ppm)	4.7 ppm

Newfoundland & Labrador	OEL Ceiling (ppm)	4.7 ppm
Nova Scotia	OEL Ceiling (ppm)	4.7 ppm
Nunavut	OEL Ceiling (mg/m³)	11 mg/m³
Nunavut	OEL Ceiling (ppm)	10 ppm
Northwest Territories	OEL Ceiling (mg/m³)	11 mg/m³
Northwest Territories	OEL Ceiling (ppm)	10 ppm
Ontario	OEL Ceiling (ppm)	4.7 ppm
Prince Edward Island	OEL Ceiling (ppm)	4.7 ppm
Québec	PLAFOND (mg/m³)	11 mg/m³
Québec	PLAFOND (ppm)	10 ppm
Saskatchewan	OEL Ceiling (ppm)	4.7 ppm
Yukon	OEL STEL (mg/m³)	16 mg/m³
Yukon	OEL STEL (ppm)	15 ppm
Yukon	OEL TWA (mg/m³)	11 mg/m³
Yukon	OEL TWA (ppm)	10 ppm

Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Oxygen detectors should be used when asphixiating gases may be released. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective goggles. Gloves. Protective clothing. Self-contained breathing apparatus.

Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use a NIOSH-approved self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Thermal Hazard Protection: If material is cold, wear thermally resistant protective gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	:	Gas
Appearance	:	Colorless
Odor	:	Odorless
Odor Threshold	:	Not available
pH	:	Not available
Relative Evaporation Rate (butylacetate=1)	:	Not available
Melting Point	:	Not available
Freezing Point	:	Not available
Boiling Point	:	Not available
Flash Point	:	Not available
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Lower Flammable Limit	:	Not available
Upper Flammable Limit	:	Not available
Vapor Pressure	:	Not available

Relative Vapor Density at 20 °C	:	Not available
Relative Density	:	Not available
Density	:	Not available
Specific Gravity	:	Not available
Solubility	:	Not available
Log Pow	:	Not available
Log Kow	:	Not available
Viscosity, Kinematic	:	Not available
Viscosity, Dynamic	:	Not available
Explosion Data – Sensitivity to Mechanical Impact	:	Not available
Explosion Data – Sensitivity to Static Discharge	:	Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Not flammable. Stable at ambient temperature and under normal conditions of use

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Contains gas under pressure; may explode if heated. Hazardous polymerization will not occur.

Conditions to Avoid: Incompatible materials. Sparks, heat, open flame and other sources of ignition.

Incompatible Materials: Can react violently with lithium, neodymium, titanium under the proper conditions.

Hazardous Decomposition Products: Nitrogen compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: In laboratory animals, related cyanide compounds did cause resorptions, malformations and teratogenic effects in offspring.

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: In laboratory animals, hydrogen cyanide has caused slight reproductive effects.

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: In elevated concentrations may cause asphyxiation, central nervous system effects, and increased breathing rate. Symptoms of asphyxiation include headache, dizziness, rapid breathing, increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremeties, unconciousness and death.

Symptoms/Injuries After Skin Contact: None expected under normal conditions of use.

Symptoms/Injuries After Eye Contact: None expected under normal conditions of use.

Symptoms/Injuries After Ingestion: None expected under normal conditions of use.

Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Hydrogen cyanide (74-90-8)	
LD50 Oral Rat	4.21 mg/kg
LD50 Dermal Rabbit	2.34 mg/kg
LC50 Inhalation Rat (ppm)	160 ppm (Exposure time: 30 min)

SECTION 12: ECOLOGICAL INFORMATION

Toxicity Not classified

Hydrogen cyanide (74-90-8)	
LC50 Fish 1	0.082 - 0.137 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	1.8 mg/l (Exposure time: 48 h - Species: Daphnia species)
LC 50 Fish 2	24 - 35 µg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])

Persistence and Degradability Not available

Bioaccumulative Potential

Hydrogen cyanide (74-90-8)	
BCF fish 1	(no bioaccumulation expected)

Mobility in Soil Not available

Other Adverse Effects Not available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional Information: Recycle the material as far as possible. Cylinders with undesired residual product may be safely vented outdoors with the proper regulator. For further information refer to section 16.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name : COMPRESSED GAS, N.O.S. (Nitrogen, Hydrogen Cyanide)

Hazard Class : 2.2

Identification Number : UN1956

Label Codes : 2.2

ERG Number : 115

14.2 In Accordance with IMDG

Proper Shipping Name : COMPRESSED GAS, N.O.S.(Nitrogen, Hydrogen Cyanide)

Hazard Class : 2.2

Identification Number : UN1956

Label Codes : 2.2

EmS-No. (Fire) : F-C

EmS-No. (Spillage) : S-V

14.3 In Accordance with IATA

Proper Shipping Name : COMPRESSED GAS, N.O.S.(Nitrogen, Hydrogen Cyanide)

Identification Number : UN1956

Hazard Class : 2

Label Codes : 2.2

ERG Code (IATA) : 2L

14.4 In Accordance with TDG

Proper Shipping Name : COMPRESSED GAS, N.O.S. (Nitrogen, Hydrogen Cyanide)

Hazard Class : 2.2

Identification Number : UN1956

Label Codes : 2.2

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Hydrogen Cyanide: 0.0001- 0.02% in Nitrogen Balance Gas	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Sudden release of pressure hazard

Nitrogen (7727-37-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Hydrogen cyanide (74-90-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 302 (Specific toxic chemical listings)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 302 Threshold Planning Quantity (TPQ)	100
SARA Section 313 - Emission Reporting	1.0 %

US State Regulations

Hydrogen cyanide (74-90-8)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	WARNING: This product contains chemicals known to the State of California to cause (Male) reproductive harm.

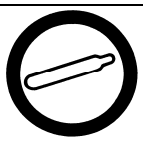
Nitrogen (7727-37-9)
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Washington - Permissible Exposure Limits - Simple Asphyxiants

Hydrogen cyanide (74-90-8)
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic
U.S. - Colorado - Hazardous Wastes - Discarded Chemical Products, Off-Specification Species, Container and Spill Residues
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities
U.S. - Delaware - Accidental Release Prevention Regulations - Threshold Quantities
U.S. - Delaware - Accidental Release Prevention Regulations - Toxic Endpoints
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Idaho - Occupational Exposure Limits - TWAs
U.S. - Illinois - Toxic Air Contaminants
U.S. - Louisiana - Reportable Quantity List for Pollutants
U.S. - Massachusetts - Allowable Ambient Limits (AALs)
U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs)
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Right To Know List
U.S. - Massachusetts - Threshold Effects Exposure Limits (TELs)
U.S. - Massachusetts - Toxics Use Reduction Act
U.S. - Michigan - Occupational Exposure Limits - Skin Designations
U.S. - Michigan - Occupational Exposure Limits - STELs
U.S. - Michigan - Polluting Materials List
U.S. - Michigan - Process Safety Management Highly Hazardous Chemicals
U.S. - Minnesota - Chemicals of High Concern
U.S. - Minnesota - Hazardous Substance List

U.S. - Minnesota - Permissible Exposure Limits - Skin Designations
U.S. - Minnesota - Permissible Exposure Limits - STELs
U.S. - Nebraska - ''P'' Listed Hazardous Wastes
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances
U.S. - New Jersey - Environmental Hazardous Substances List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)
U.S. - New York - Occupational Exposure Limits - Skin Designations
U.S. - New York - Occupational Exposure Limits - TWAs
U.S. - New York - Part 326 - Restricted Pesticides
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances
U.S. - North Carolina - Control of Toxic Air Pollutants
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S. - North Dakota - Hazardous Wastes - Discarded Chemical Products, Off-Specification Species, Container and Spill Residues
U.S. - Ohio - Accidental Release Prevention - Threshold Quantities
U.S. - Ohio - Extremely Hazardous Substances - Threshold Quantities
U.S. - Oregon - Permissible Exposure Limits - Skin Designations
U.S. - Oregon - Permissible Exposure Limits - TWAs
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual
U.S. - South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations
U.S. - South Carolina - Toxic Air Pollutants - Pollutant Categories
U.S. - Tennessee - Occupational Exposure Limits - Skin Designations
U.S. - Tennessee - Occupational Exposure Limits - STELs
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Vermont - Hazardous Waste - Acutely Hazardous Wastes
U.S. - Vermont - Hazardous Waste - Hazardous Constituents
U.S. - Vermont - Permissible Exposure Limits - Skin Designations
U.S. - Vermont - Permissible Exposure Limits - STELs
U.S. - Washington - Dangerous Waste - Dangerous Waste Constituents List
U.S. - Washington - Dangerous Waste - Discarded Chemical Products List
U.S. - Washington - Permissible Exposure Limits - Skin Designations
U.S. - Washington - Permissible Exposure Limits - STELs
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet
U.S. - Wyoming - Process Safety Management - Highly Hazardous Chemicals

Canadian Regulations

Hydrogen Cyanide: 0.0001- 0.02% in Nitrogen Balance Gas	
WHMIS Classification	Class A - Compressed Gas



Nitrogen (7727-37-9)

Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class A - Compressed Gas

Hydrogen cyanide (74-90-8)	
Listed on the Canadian DSL (Domestic Substances List) inventory. Listed on the Canadian Ingredient Disclosure List	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class F - Dangerously Reactive Material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION

Revision date : 04/04/2014

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 1 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 1
Acute Tox. 1 (Oral)	Acute toxicity (oral) Category 1
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Compressed gas	Gases under pressure Compressed gas
Flam. Liq. 1	Flammable liquids Category 1
Simple Asphy	Simple Asphyxiant
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
H224	Extremely flammable liquid and vapor
H280	Contains gas under pressure; may explode if heated
H300	Fatal if swallowed
H310	Fatal in contact with skin
H330	Fatal if inhaled
H370	Causes damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Party Responsible for the Preparation of This Document

Calgaz, division of Air Liquide aB&T

Phone Number: 713-896-2896

This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this gas mixture. To the best of CALGAZ knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this gas mixture is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

North America GHS US 2012 & WHMIS