A DIVISION OF NORCO, INC.

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Emergency Contact: Chemtrec (800) 424-9300
Or Norco (208) 336-1643

Carbon Monoxide 0.0001% to 0.5%, Carbon Dioxide 0.0001% to 5%, Oxygen 5% to 23.5%, in Nitrogen

MATERIAL SAFETY DATA SHEET

Identification

Product Name: Carbon Monoxide 0.0001% to 0.5%, Carbon Dioxide 0.0001% to 5%, Oxygen 5% to 23.5%, in Nitrogen
CAS Number: N/A
Revision Date: 09/06/13
Chemical Family: Gas Mixture
Last Review Date: 09/06/13
Chemical Formula: CO, CO_2, O_2 in N_2
Synonyms: Calibration gas mixture
MSDS Identification Code/Number: NLB 3210
Prepared By: Quality Dept.

Composition, Information on Ingredients

Exposure Limits[1]:

INGREDIENT	% VOLUME	PEL-OSHA[2]	TLV-ACGIH[3]	LD_{50} or LC_{50} Route/Species
Carbon Monoxide Formula: CO CAS Number: 630-08-0 RTECS#: FG3500000	0.0001% to 0.5%	50 PPM TWA	25 PPM TWA	LC_{50} 3760 PPM Inhalation/rat 1 Hr. time adj.
Carbon Dioxide Formula: CO_2 CAS Number: 124-38-9 RTECS#: FF6400000	0.0001% to 5.0%	5,000 PPM TWA	5,000 PPM TWA 30,000 PPM STEL	Not Available
Oxygen FormulaO_2 CAS Number: 7782-44-7 RTECS#: RS2060000	5.0% to 23.5%	Not Available	Not Available	Not Available
Nitrogen Formula: N_2 CAS Number: 7727-37-9 RTECS#: QW9700000	71 to 95%	None Established	Simple Asphixiant	Not Available

[1]Refer to individual state or provincial regulations, as applicable, for limits that may be more stringent than those listed here.
[2] As stated in 29 CFR 1910, Subpart Z (revised July 1, 1993).
[3] As stated in the ACGIH 2007 Threshold Limit Values for Chemical Substances and Physical Agents.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.
IDLH:

Hazards Identification

Emergency Overview:
Odorless, colorless, nonflammable gas. This product contains up to 0.5% carbon monoxide. Inhalation of carbon monoxide can reduce the ability of the blood to carry oxygen to the body and may adversely affect fetal development. Effects depend on the level of exposure and may include headaches, dizziness, convulsions, loss of consciousness and death. Carbon dioxide exposure can cause nausea and respiratory problems. High concentrations may cause vasodilatation leading to circulatory collapse. Mixtures with less than 19.5% oxygen act as a simple asphixiant. Effects may include headaches, dizziness and loss of consciousness. Non-toxic. Contents under pressure. Use and store below 125^0F (52^0C).

Hazards Identification Continued

Route of Entry:

Skin Contact	Skin Absorption	Eye Contact	Inhalation	Ingestion
No	No	No	Yes	No

Health Effects:

Exposure Limits	Irritant	Sensitization
Yes	No	No
Teratogen	Reproductive Hazard	Mutagen
Yes	Yes	Yes
Synergistic Effects None reported.		

Carcinogenicity: NTP: No IARC: No OSHA: No

Eye Effects:
Contact with rapidly expanding gas near the point of release may cause frostbite.

Skin Effects:
Contact with rapidly expanding gas near the point of release may cause frostbite with redness, skin color change to gray or white, and blistering.

Ingestion Effects:
Ingestion is unlikely. Gas at room temperature.

Inhalation Effects:
This product contains up to 0.5% carbon monoxide. Inhalation of relative high concentrations of this gas may cause symptoms of carbon monoxide exposure.

Carbon monoxide is a chemical asphixiant. Inhaled carbon monoxide binds with blood hemoglobin to form carboxyhemoglobin. Carboxyhemoglobin cannot take part in normal oxygen transport, greatly reducing the blood's ability to transport oxygen. Depending on concentration of carbon monoxide and duration of exposure, symptoms may include headache, dizziness, heart palpitations, weakness, confusion, nausea, and even convulsions, eventual unconsciousness and death. Lack of oxygen from carbon monoxide over exposure may produce immediate as well as delayed neurological effects. Carbon monoxide may also adversely affect fetal development.

Carbon dioxide is a cerebral vasodilator. Inhaling large concentrations causes rapid circulatory insufficiency leading to coma and death. Chronic, harmful effects are not known from repeated inhalation of low concentrations. Low concentrations of carbon dioxide cause increased respiration and headache.

Mixtures which contain < 19.5% oxygen may act as simple asphyxiants. Effects of oxygen deficiency resulting from simple asphyxiants may include: rapid breathing, diminished mental alertness, impaired muscular coordination, faulty judgment, depression of all sensations, emotional instability, and fatigue. As asphyxiation progresses, nausea, vomiting, prostration, and loss of consciousness may result, eventually leading to convulsions, coma and death.

Oxygen deficiency during pregnancy has produced developmental abnormalities in humans and experimental animals.

Medical Conditions Aggravated by Exposure:
None known. Recovery from carbon monoxide may be adversely affected by obesity, alcoholism, and chronic heart disease.

NFPA Hazard Codes		HMIS Hazard Codes		Ratings System
Health:	0	Health:	0	0 = No Hazard
Flammability:	0	Flammability:	0	1 = Slight hazard
Instability:	0	Physical Hazard:	3	2 = Moderate Hazard
				3 = Serious Hazard
				4 = Severe Hazard

Hazard ratings were assigned in accordance with Compressed Gas Association (CGA) guidelines as published in CGA Pamphlet P-19-2009, *CGA Recommended Hazard Ratings for Compressed Gases, 3rd Edition.*

First Aid Measures

Eye:
None required for gas. If frostbite is suspected, flush eyes with cool water for 15 minutes and obtain immediate medical attention.

Skin:
None required for gas. For frostbite, immerse skin in lukewarm water. DO NOT USE HOT WATER. Obtain immediate medical attention.

Ingestion:
None Required

Inhalation:
PROMPT REMOVAL FROM THE CONTAMINATED AREA AND IMMEDIATE MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS.

Conscious persons should be assisted to an uncontaminated area and be treated with supplemental oxygen. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area and be given artificial respiration and oxygen at the same time. The administering of the oxygen at an elevated pressure (up to 2 to 2.5 atmospheres) has shown to be beneficial as has treatment in a hyperbaric chamber. The physician should be informed that the patient has inhaled toxic quantities of carbon monoxide.

Fire Fighting Measures

Conditions of Flammability: Not flammable		
Flash point: None	Method: Not Applicable	Autoignition Temperature: None
LEL (%): 12.5% for Carbon Monoxide	UEL (%): 74.0% for Carbon Monoxide	
Hazardous combustion products: None		
Sensitivity to mechanical shock: None		
Sensitivity to static discharge: None		

Fire and Explosion Hazards:
Nonflammable This product contains concentrations of carbon monoxide (up to 0.5%) below the LEL of 12.5% for carbon monoxide in air. This gas mixture may contain sufficient oxygen to support combustion. Cylinder may vent rapidly or rupture violently from pressure when involved in a fire situation.

Extinguishing Media:
None Required. Use media appropriate for surrounding materials.

Fire Fighting Instructions:
Stop the flow of gas if it can be done without risk. Use water spray to cool surrounding containers. Continue to cool surrounding containers until well after flames are extinguished. Firefighters should wear a full-face piece, NIOSH/MSHA-approved self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout gear.

Accidental Release Measures

Evacuate all personnel from affected area. Use appropriate protective equipment. If a leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. If leak is in container or container valve, contact the appropriate emergency telephone number listed in Section 1 or call your closest Norco/NorLab location.

Handling and Storage

Electrical classification:
Non hazardous

Handling and Storage Continued

Carbon monoxide can be handled in all commonly used metals up to approximately 500 psig (3450 kPa). Above that pressure it forms toxic and corrosive carbonyl compounds with some metals. Carbon steels, aluminum alloys, copper and copper alloys, low carbon stainless steels and nickel-based alloys such as Hastelloy A, B & C are recommended for higher pressure applications.

Use only in well ventilated areas. Valve protection caps must remain in place unless cylinder is secured with valve outlet piped to use point. Do no drag, slide, or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure regulator when connecting cylinder to lower pressure (, 3000 psig) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder.

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area of non-combustible construction, away from heavy traffic areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 125^0F (52^0C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Post "NO SMOKING OR OPEN FLAMES" signs in the storage or use area.

For additional recommendations, consult Compressed Gas Association's Pamphlet P-1.

Exposure Controls, Personal Protection

Engineering Controls:
Use local exhaust to prevent accumulation above the exposure limit. Use general mechanical ventilation in accordance with electrical codes.

Eye/Face Protection:
Safety goggles or glasses

Skin Protection:
Protective gloves made of any suitable material

Respiratory Protection:
For emergency release, use a positive pressure NIOSH approved air-supplying respirator system (SCBA or airline/escape bottle) using at a minimum Grade D air.

Other/General Protection:
Safety shoes, safety shower, eyewash "fountain"

Physical and Chemical Properties

PARAMETER	VALUE	UNITS
Physical state (gas, liquid, solid)	: Gas	
Vapor pressure	: Not Available	
Vapor density (Air = 1)	: ~ 1	
Evaporation point	: Not Available	
Boiling point	: Not Available	^{O}F
	: Not Available	^{O}C
Freezing point	: Not Available	^{O}F
	: Not Available	^{O}C
pH	: Not Available	
Specific gravity	: Not Available	
Oil/water partition coefficient	: Not Available	
Solubility (H_2O)	: Very slight	
Odor threshold	: Not Applicable	
Odor and appearance	: Colorless, odorless gas.	

Stability and Reactivity

Stability:
Stable

Incompatible Materials:
None known

Hazardous Decomposition Products:
Carbonic acid in the presence of water or moisture.

Hazardous Polymerization:
Will no occur

Toxicological Information

Inhalation:
Mice exposed to concentrations of carbon monoxide at 65 ppm and higher demonstrated dose-dependent effects on the fetus (i.e.: increased mortality and decreased weight) with no signs of maternal toxicity. Off spring of rats exposed to 150 ppm carbon monoxide had minor reductions in birth weight and persistent memory deficits which became more pronounced in adulthood. Fetal carboxyhemogolbin levels are generally 10 – 15% higher than maternal levels. Overexposure to carbon monoxide may also decrease the likelihood of successful pregnancy. In rats treated with carbon monoxide, the rate of successful pregnancy in the control group was 1005 whereas the rate of successful pregnancy in animals treated with 30 and 90 ppm carbon monoxide was 69% and 38% respectively.

Inhaling high concentrations of carbon dioxide may cause circulatory insufficiency leading to coma and death. Chronic, harmful effects are not known from repeated inhalation of low (3 to 5 molar %) concentrations.

Reproductive:
Genetic changes were observed in mammalian cell assay systems at exposures of 1500 to 2500 ppm carbon monoxide for 10 minutes and degenerative changes to the brain were noted in rats chronically exposed to 26 ppm (30 mg/m^3).

Exposure of female rats to 60,000 ppm carbon dioxide for 24 hours has produced toxic effects to the embryo and fetus in pregnant rats. Toxic effects to the reproductive system have been observed in other mammalian species at similar concentrations.

Ecological Information

Product does not contain Class I or Class II ozone depleting substances. Not highly toxic. Will not bioconcentrate.

Disposal Considerations

Do not attempt to dispose of waste or unused quantities in returnable cylinders. Return in the shipping container, *properly labeled, with any valve outlet plugs or caps secure and valve protection cap in place* to NorLab for proper disposal. Non-refillable containers should be vented in a well-ventilated area then disposed of in compliance with local regulations, or returned to NorLab.

Transportation Information

Parameter	United States DOT	Canada TDG
Proper Shipping Name:	Compressed Gas, N.O.S., (Carbon Monoxide, Nitrogen)	Compressed Gas, N.O.S.
Hazard Class:	2.2	2.2
Identification Number:	UN 1956	UN 1956
Shipping Label:	Non-flammable Gas	Non- Flammable Gas

Regulatory Information

SARA Title III Notifications and Information:

SARA Title III – Hazard Classes:
Acute Health Hazard
Sudden Release of Pressure Hazard

SARA Title III- Section 313 Supplier Notification:
This product does not contain toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372.

California Proposition 65:
This product contains ingredient(s) (carbon monoxide) known to the State of California to cause birth defects or other reproductive harm.

Other Information

Compressed gas cylinders must not be refilled without the express written permission of the owner. Shipment of a compressed gas cylinder which has not been filled by the owner or with his/her (written) consent is a violation of transportation regulations.

Disclaimer of expressed and implied warranties:
Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

NorLAB
A DIVISION OF NORCO, INC.

Emergency Contact: Chemtrec (800) 424-9300
Or Norco (208) 336-1643

1125 West Amity Road
Boise, ID 83705
(208) 336-1643

N-Pentane 0.0001% to 4.39% in Nitrogen

MATERIAL SAFETY DATA SHEET

Identification

Product Name: N-Pentane 0.0001% to 4.39 % in Nitrogen
Chemical Name: N-Pentane in Nitrogen
Chemical Family: Gas Mixture
CAS Number: N/A
Common Names/Synonyms: N/A
MSDS Identification Code/Number: NLB2820
Prepared by: Quality Dept.

Revision Date: 02/21/08
Last Review Date: 08/18/11

Composition, Information on Ingredients, Exposure Limits

Exposure Limits[1]

Ingredient	% Volume	PEL-OSHA[1]	TLV-ACGIH[2]	LD_{50} or LC_{50} Route/Species
N-Pentane Formula: C_5H_{12} CAS: 109-66-0 RTECS#: RZ9450000	0.0001% to 4.39%	1000 PPM	600 PPM TWA	LC_{50} 12.3% inhalation rat (4 Hr)
Nitrogen Formula: N_2 CAS: 7727-37-9 RTECS#: QW9700000	Balance	None Established	Simple Asphyxiant	Not Applicable

[1] Refer to individual state or provincial regulations, as applicable, for limits that may be more stringent than those listed here.
[2] As stated in 29 CFR 1910, Subpart Z (revised July1, 1993)
[3] As stated in the ACGIH 2007 Threshold Limit Values for Chemical Substances and Physical Agents

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

IDLH: 1500 PPM (10% LEL) N-Pentane

Hazards Identification

Emergency Overview:
Simple Asphyxiant-This product does not contain oxygen and may cause asphyxia if released in a confined area. Colorless, non-flammable gas with a mild gasoline type odor. High concentrations may have a narcotic effect. Repeated or prolonged skin contact may cause irritation or dermatitis. Use only with adequate ventilation. Contents under pressure. Use and store below $125^{O}F$ ($52^{O}C$).

Route of Entry:

Skin Contact	Skin Absorption	Eye Contact	Inhalation	Ingestion
Yes	No	Yes	Yes	No

Health Effects:

Exposure Limits	Irritant	Sensitization
Yes	Yes	No
Teratogen	Reproductive Hazard	Mutagen
No	No	No
Synergistic Effects None reported		

Hazards Identification Continued

Carcinogenicity: NTP: No IARC: No OSHA: No

Eye Effects:
May cause minor irritation. Contact with rapidly expanding gas near the point of release may cause frostbite.

Skin Effects:
N-Pentane is a primary skin irritant and fat solvent. Prolonged or repeated contact may tend to dry and defat skin causing irritation and dermatitis. Contact with rapidly expanding gas near the point of release may cause frostbite with redness, skin color change to gray or white, and blistering.

Ingestion Effects:
None known. Ingestion is unlikely as product is a gas at room temperature.

Inhalation Effects:
High concentrations of vapors may have a narcotic effect. Symptoms may include dizziness, headache and nausea.

Medical Conditions Aggravated by Exposure:
None known.

NFPA Hazard Codes		**HMIS Hazard Codes**		**Ratings System**
Health:	1	Health:	1	0: No Hazard
Flammability:	0	Flammability:	0	1: Slight Hazard
Instability:	0	Physical Hazards:	3	2: Moderate Hazard
				3: Serious Hazard
				4: Severe Hazard

Ratings were assigned in accordance with Compressed Gas Association (CGA) guidelines as published in CGA Pamphlet P-19 2009 *CGA Recommended Hazard Ratings for Compressed Gases, 3rd Edition.*

First Aid Measures

Eyes:
Flush eyes with water for 15 minutes. If irritation persists or frostbite occurs, seek medical attention.

Skin:
Rinse skin thoroughly with water. For skin, immerse skin in lukewarm water. DO NOT USE HOT WATER. For frostbite or persistent irritation, seek medical attention.

Ingestion:
None required. Product is a gas at normal temperatures and conditions.

Inhalation:
PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS. Victims should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, and if breathing has stopped, administer artificial resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive.

Fire Fighting Measures

Conditions of Flammability: Not flammable		
Flash Point: Not Available	Method: Not Available	Autoignition Temperature: Not Available
LEL % None	UEL % None	
Hazardous Combustion Products: Small amounts of carbon monoxide, carbon dioxide.		
Sensitivity to mechanical shock: None		
Sensitivity to static discharge: None		

Fire Fighting Measures Continued

Fire and Explosion Hazards:
Nonflammable. Contains N-Pentane in concentrations below the LEL in nitrogen of 4.4%. Cylinders may rupture violently from pressure when involved in a fire situation.

Extinguishing Media:
None required. Use as appropriate for surrounding materials.

Fire Fighting Instructions:
If possible, stop the flow of gas supply. Use water spray to cool adjacent cylinders and areas. Fire fighters should wear a full-facepiece NIOSH/MSHA approved self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout gear.

Accidental Release Measures

Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with inert gas prior to attempting repairs. If leak is in container or valve, contact the appropriate emergency telephone number listed in section 1 or call your closest Norco/NorLab location.

Handling and Storage

Gas mixture is non-corrosive and may be used with any common structural material.

Use only in well-ventilated areas. Valve protection caps must remain in place unless the cylinder is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure regulator when connecting cylinder to lower pressure (<3000 PSIG) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous backflow into the cylinder.

Protect cylinders from physical damage. Store in cool, dry, well ventilated area of non-combustible construction away from heavy traffic areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 125^{O}F (52^{0}C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in – first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Post "NO SMOKING OR OPEN FLAMES" sign in the storage or use area.

For additional recommendations, consult Compressed Gas Association Pamphlets P-1.

Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid from in an enclosed space such as a car trunk, van or station wagon. A leak can result in a fire, explosion, asphyxiation or a toxic exposure.

Exposure Controls, Personal Protection

Engineering Controls:
Local exhaust used in combination with general ventilation as necessary to maintain air contaminants at or below acceptable exposure guidelines.

Eye/Face Protection:
Safety goggles or glasses as appropriate for the job.

Skin Protection:
Protective gloves of nitrile rubber or polyvinyl alcohol.
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Respiratory Protection:
Positive pressure air line with full-face mask and escape bottle or self-contained breathing apparatus should be available for emergency use.

Other/General Protection:
Safety shoes.

Physical and Chemical Properties

Parameter	Value	Units
Physical state (gas, liquid, solid)	: Gas	
Vapor pressure	: Above critical temp.	
Vapor density (Air = 1)	: ~ 1	(as air)
Evaporation point	: Not Available	
Boiling point	: Not Available	
Freezing point	: Not Available	
pH	: Not Applicable	
Specific gravity	: Not Available	
Oil/water partition coefficient	: Not Available	
Solubility (H_2O)	: Slight	(as N-Pentane)
Odor threshold	: 300 – 500 PPM	(as N-Pentane)
Odor and appearance	: Colorless gas with a slight gasoline type odor.	

Stability and Reactivity

Stability:
Stable

Incompatible Materials:
None

Hazardous Polymerization:
Does not occur.

Toxicological Information

Inhalation:
Ten minute exposures to N-Pentane concentrations of 5,000 PPM (0.5%) produced slight dizziness within a few minutes in humans.

Skin and Eye:
N-Pentane is a mucous membrane irritant in animals. Ten-minute exposure in humans to 5,000 PPM (0.5%) N-pentane did not produce noticeable eye, nose or respiratory tract irritation. Undiluted N-Pentane applied to human skin for 1 hour and 5 hours cause immediate irritation (hyperemia, erythema, pigmentation and swelling) with blisters after 5 hours. Mild symptoms continued for up to 96 hours after exposure, but no permanent scarring was observed.

Chronic:
Exposures to N-Pentane alone in animals have not caused neurologic damage. It is possible that N-Pentane in solvent mixtures may potentiate hexacarbon neuropathy in humans.

Ecological Information

Product does not contain any Class I or Class II ozone depleting substances. Not toxic. Will not bioconcentrate.

Disposal Considerations

Do not attempt to dispose of waste or unused quantities in returnable cylinders. Return in the shipping container, properly labeled, with any valve outlet plugs or caps secure and valve protection cap in place, to Norco or NorLab for proper disposal. Non-refillable containers should be vented in a well-ventilated area then disposed of in accordance with local regulations, or returned to NorLab.

Transport Information

Parameter	United States DOT	Canada TDG
Proper Shipping Name:	Compressed Gas, N.O.S., (N-Pentane, Nitrogen)	Compressed Gas, N.O. S.
Hazard Class:	2.2	2.2
Identification Number:	UN 1956	UN 1956
Shipping Label:	Non-flammable Gas	Non-flammable Gas

Regulatory Information

SARA Title III Notifications and Information:
N-Pentane is listed under the accident prevention provisions of section 112(r) of the Clean Air Act (CAA) with a threshold quantity (TQ) of 10,000 pounds.

SARA Title III-Section 313 Supplier Notification
This product does not contain ingredients subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and of 40 CFR Part 372.

SARA Title III – Hazard Classes:
Acute Health Hazard
Sudden Release of Pressure Hazard

California Proposition 65:
This product does not contain ingredient(s) known to the State of California to cause cancer or reproductive toxicity.

Other Information

ACGIH	American Conference of Governmental Industrial Hygienists
DOT	Department of Transportation
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
SARA	Superfund Amendments and Reauthorization Act
STEL	Short Term Exposure Limit
TDG	Transportation of Dangerous Goods
TLV	Threshold Limit Value

Compressed gas cylinders shall not be refilled without the express written permission of the owner. Shipment of a compressed gas cylinder which has not been filled by the owner or with his/her (written) consent is a violation of transportation regulations.

Disclaimer of Expressed and Implied Warranties:
Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).