

## Safety Data Sheet



### Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1 Product identifier

- Product Name** • 0.0–2.2% Methane; 0.25% Ethane; 0.0–475 ppm Propane; 0.0–250 ppm Butane; Air balance gas
- Product Code** • MSDS No. 50135

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

- Relevant identified use(s)** • Calibration of industrial gas devices

#### 1.3 Details of the supplier of the safety data sheet

- Manufacturer** • Air Liquide  
2700 Post Oak Blvd.  
Houston, TX 77056  
United States  
www.us.airliquide.com
- Telephone (Technical)** • 713-896-2896
- Telephone (Technical)** • 800-819-1704

#### 1.4 Emergency telephone number

- Manufacturer** • 800-424-9300 - CHEMTREC
- Manufacturer** • +1 703-527-3887 - Outside United States

### Section 2: Hazards Identification

#### EU/EEC

According to EU Directive 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]  
According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

#### 2.1 Classification of the substance or mixture

- CLP** • Compressed Gas - H280
- DSD/DPD** • Not classified

#### 2.2 Label Elements

CLP

#### WARNING



**Hazard statements** • H280 - Contains gas under pressure; may explode if heated

#### Precautionary statements

**Storage/Disposal** ● P410+P403 - Protect from sunlight. Store in a well-ventilated place.

**DSD/DPD**

**Risk phrases** ● Classification criteria not met and currently not classified under Annex I of the Directive

## 2.3 Other Hazards

**CLP** ● According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

**DSD/DPD** ● This preparation is not considered dangerous according to European Directive 1999/45/EC.

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## UN GHS

According to Third Revised Edition

### 2.1 Classification of the substance or mixture

**UN GHS** ● Compressed Gas - H280

### 2.2 Label elements

**UN GHS**

**WARNING**



**Hazard statements** ● H280 - Contains gas under pressure; may explode if heated

### Precautionary statements

**Storage/Disposal** ● P410+P403 - Protect from sunlight. Store in a well-ventilated place.

### 2.3 Other hazards

**UN GHS** ● According to the Globally Harmonized System for Classification and Labeling (GHS) this product is considered hazardous.

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## United States (US)

According to OSHA 29 CFR 1910.1200 HCS

### 2.1 Classification of the substance or mixture

**OSHA HCS 1994** ● Compressed Gas

### 2.2 Label elements

**OSHA HCS 1994** ● Not required

### 2.3 Other hazards

**OSHA HCS 1994** ● Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

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## Canada

According to WHMIS

### 2.1 Classification of the substance or mixture

**WHMIS** ● Compressed Gas - A

### 2.2 Label elements

## WHMIS



- Compressed Gas - A

## 2.3 Other hazards

## WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

## Section 3 - Composition/Information on Ingredients

## 3.1 Substances

- Material does not meet the criteria of a substance according to United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

## 3.2 Mixtures

Hazardous Components					
Chemical Name	Identifiers	%(weight)	LD50/LC50	Classifications According to Regulation/Directive	Comments
Methane	CAS:74-82-8 EC Number:200-812-7 UN:UN1971	0% TO 2.2%	NDA	UN GHS: Flam. Gas 1; Press. Gas - Comp EU DSD/DPD: Annex I - F+; R12 EU CLP: Annex VI - Flam. Gas 1, H220; Press. Gas - Comp	NDA
Ethane	CAS:74-84-0 EC Number:200-814-8 UN:UN1035	0% TO 0.25%	NDA	UN GHS: Flam. Gas 1; Press. Gas - Comp EU DSD/DPD: Annex I - F+; R12 EU CLP: Annex VI - Flam. Gas 1, H220; Press. Gas - Comp	NDA
Propane	CAS:74-98-6 EC Number:200-827-9 UN:UN1978	0% TO 0.0475%	NDA	UN GHS: Flam. Gas 1; Press. Gas - Comp EU DSD/DPD: Annex I - F+; R12 EU CLP: Annex VI - Flam. Gas 1, H220; Press. Gas - Comp	475 ppm
Butane	CAS:106-97-8 EC Number:203-448-7 UN:UN1011	0% TO 0.025%	Inhalation-Rat LC50 • 658 g/m <sup>3</sup> 4 Hour(s)	UN GHS: Flam. Gas 1; Press. Gas - Comp EU DSD/DPD: Annex I - F+; R12 EU CLP: Annex VI - Flam Gas 1, H220; Press Gas	250 ppm
Air - compressed, atmospheric	CAS:132259-10-0	na	NDA	UN GHS: Press. Gas - Comp EU DSD/DPD: Not Classified EU CLP: Self Classified - Press. Gas - Comp, H280	Balance

## Section 4 - First Aid Measures

### 4.1 Description of first aid measures

#### Inhalation

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. If signs/symptoms continue, get medical attention.

#### Skin

- IF ON SKIN: Wash with plenty of soap and water. If irritation develops and persists, get medical attention.

#### Eye

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

#### Ingestion

- If ingested, call control center or doctor immediately for treatment advice.

### 4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

### 4.3 Indication of any immediate medical attention and special treatment needed

#### Notes to Physician

- Treat symptoms and eliminate over-exposure.

## Section 5 - Firefighting Measures

### 5.1 Extinguishing media

**Suitable Extinguishing Media** ● Non-flammable gas mixture. Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media** ● None known.

### 5.2 Special hazards arising from the substance or mixture

**Unusual Fire and Explosion Hazards** ● This gas mixture is not flammable; however, containers, when involved in fire, may rupture or burst in the heat of the fire.

**Hazardous Combustion Products** ● Oxides of carbon.

### 5.3 Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA).

## Section 6 - Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**Personal Precautions** ● Wear appropriate personal protective equipment. See section 8 for more information.

**Emergency Procedures** ● In the event of a release in which the atmosphere is unknown, and in which other chemicals are potentially involved, evacuate immediate area. Such releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a leak, clear the affected area, protect people, and respond with trained personnel.

### 6.2 Environmental precautions

- Avoid release to the environment.

### 6.3 Methods and material for containment and cleaning up

**Containment/Clean-up Measures** ● Allow the gas mixture to dissipate. If necessary, monitor the surrounding area (and the original area of the release) for concentrations of component gases.

Concentrations of component gases must be below any exposure limits listed in Section 8.

## 6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

## Section 7 - Handling and Storage

### 7.1 Precautions for safe handling

#### Handling

- Use good safety and industrial hygiene practices. Use only with adequate ventilation. Cylinders should be firmly secured to prevent falling or being knocked-over. Do not attempt to repair, adjust, or in any other way modify cylinders. If there is a malfunction or another type of operational problem, contact nearest distributor immediately.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage

- Cylinders should be stored in dry, well-ventilated areas away from sources of heat, ignition and direct sunlight. Do not allow area where cylinders are stored to exceed 52°C (125°F). Cylinders must be protected from the environment, and preferably kept at room temperature (approximately 21°C (70°F)). Cylinders should be firmly secured to prevent falling or being knocked-over. Protect cylinders against physical damage.

### 7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

## Section 8 - Exposure Controls/Personal Protection

### 8.1 Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	Canada Ontario	Canada Quebec	Germany DFG	Germany TRGS
Butane (106-97-8)	TWAs	1000 ppm TWA	800 ppm TWAEV; 1900 mg/m3 TWAEV	800 ppm TWAEV; 1900 mg/m3 TWAEV	Not established	1000 ppm TWA (exposure factor 4); 2400 mg/m3 TWA (exposure factor 4)
	Ceilings	Not established	Not established	Not established	4000 ppm Peak; 9600 mg/m3 Peak	Not established
	MAKs	Not established	Not established	Not established	1000 ppm MAK; 2400 mg/m3 MAK	Not established
Ethane (74-84-0)	TWAs	1000 ppm TWA	1000 ppm TWAEV	Not established	Not established	Not established
Propane (74-98-6)	TWAs	1000 ppm TWA	1000 ppm TWAEV	1000 ppm TWAEV; 1800 mg/m3 TWAEV	Not established	1000 ppm TWA (exposure factor 4); 1800 mg/m3 TWA (exposure factor 4)
	Ceilings	Not established	Not established	Not established	4000 ppm Peak; 7200 mg/m3 Peak	Not established
	MAKs	Not established	Not established	Not established	1000 ppm MAK; 1800 mg/m3 MAK	Not established
Methane (74-82-8)	TWAs	1000 ppm TWA	1000 ppm TWAEV	Not established	Not established	Not established

Exposure Limits/Guidelines (Con't.)				
	Result	NIOSH	OSHA	Singapore
Butane (106-97-8)	TWAs	800 ppm TWA; 1900 mg/m3 TWA	Not established	800 ppm PEL; 1900 mg/m3 PEL
Propane (74-98-6)	TWAs	1000 ppm TWA; 1800 mg/m3 TWA	1000 ppm TWA; 1800 mg/m3 TWA	Not established

### Exposure Control Notations

#### Canada Quebec

- Ethane (74-84-0): **Simple Asphyxiants:** (Simple Asphyxiant)
- Methane (74-82-8): **Simple Asphyxiants:** (Simple Asphyxiant)

#### Germany DFG

- Propane (74-98-6): **Pregnancy:** (classification not yet possible)
- Butane (106-97-8): **Pregnancy:** (classification not yet possible)

### Exposure Limits Supplemental

#### ACGIH

- Ethane (74-84-0): **TLV Basis - Critical Effects:** (cardiac sensitization; CNS impairment)
- Propane (74-98-6): **TLV Basis - Critical Effects:** (cardiac sensitization; CNS impairment)
- Butane (106-97-8): **TLV Basis - Critical Effects:** (cardiac sensitization; CNS impairment)
- Methane (74-82-8): **TLV Basis - Critical Effects:** (cardiac sensitization; CNS impairment)

## 8.2 Exposure controls

### Engineering Measures/Controls

- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

### Personal Protective Equipment

#### Pictograms



#### Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

#### Eye/Face

- Wear safety glasses.

#### Skin/Body

- Wear protective gloves leather gloves when handling cylinders; chemically resistant gloves and clothing when using this gas mixture.

### Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

## Section 9 - Physical and Chemical Properties

### 9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Gas	Appearance/Description	Gas mixture is colorless, odorless.
Color	Colorless	Odor	Odorless
Taste	No data available	Particulate Type	Not relevant
Particulate Size	Not relevant	Aerosol Type	Not relevant
Odor Threshold	Not relevant	Physical and Chemical Properties	No data available

<b>General Properties</b>			
<b>Boiling Point</b>	-317.8 F(-194.3333 C) for Air	<b>Melting Point</b>	-357.2 F(-216.2222 C) @ 10 psig for Air
<b>Decomposition Temperature</b>	No data available	<b>Heat of Decomposition</b>	No data available
<b>pH</b>	Not relevant	<b>Specific Gravity/Relative Density</b>	1 Water=1 @ 21.1 C(69.98 F)
<b>Density</b>	1.202 kg/m <sup>3</sup> @ 15 C(59 F) Gas Density	<b>Bulk Density</b>	No data available
<b>Water Solubility</b>	0.0292 (vol/vol) for Air	<b>Solvent Solubility</b>	No data available
<b>Viscosity</b>	0.0002 Poise (P, Ps) or dyne- second/cm <sup>2</sup> @ 0 C(32 F)	<b>Explosive Properties</b>	No data available
<b>Oxidizing Properties:</b>	No data available		
<b>Volatility</b>			
<b>Vapor Pressure</b>	Not relevant	<b>Vapor Density</b>	1 Air=1
<b>Evaporation Rate</b>	Not relevant	<b>VOC (Wt.)</b>	No data available
<b>VOC (Vol.)</b>	No data available	<b>Volatiles (Wt.)</b>	No data available
<b>Volatiles (Vol.)</b>	No data available		
<b>Flammability</b>			
<b>Flash Point</b>	Not relevant	<b>UEL</b>	No data available
<b>LEL</b>	No data available	<b>Autoignition</b>	Not relevant
<b>Self-Accelerating Decomposition Temperature (SADT)</b>	No data available	<b>Heat of Combustion (ΔHc)</b>	No data available
<b>Burning Time</b>	No data available	<b>Flame Duration</b>	No data available
<b>Flame Height</b>	No data available	<b>Flame Extension</b>	No data available
<b>Ignition Distance</b>	No data available	<b>Flammability (solid, gas)</b>	No data available
<b>Environmental</b>			
<b>Half-Life</b>	No data available	<b>Octanol/Water Partition coefficient</b>	No data available
<b>Coefficient of water/oil distribution</b>	Not relevant	<b>Bioaccumulation Factor</b>	No data available
<b>Bioconcentration Factor</b>	No data available	<b>Biochemical Oxygen Demand BOD/BOD5</b>	No data available
<b>Chemical Oxygen Demand</b>	No data available	<b>Persistence</b>	No data available
<b>Degradation</b>	No data available		

## 9.2 Other Information

- No additional physical and chemical parameters noted.

## Section 10: Stability and Reactivity

### 10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability

- Stable under normal temperatures and pressures.

### 10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

### 10.4 Conditions to avoid

- Excess heat. Incompatible materials.

### 10.5 Incompatible materials

- Oxidizers

### 10.6 Hazardous decomposition products

- None known.

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

Component Name	CAS	Data
Methane (0% TO 2.2%)	74-82-8	<b>Acute Toxicity:</b> ihl-mus LC50:500000 ppm/2H
GHS Properties		Classification
Acute toxicity		EU/CLP • Classification criteria not met UN GHS • Classification criteria not met
Aspiration Hazard		EU/CLP • Not relevant UN GHS • Not relevant
Carcinogenicity		EU/CLP • Classification criteria not met UN GHS • Classification criteria not met
Germ Cell Mutagenicity		EU/CLP • Classification criteria not met UN GHS • Classification criteria not met
Skin corrosion/Irritation		EU/CLP • Classification criteria not met UN GHS • Classification criteria not met
Skin sensitization		EU/CLP • Classification criteria not met UN GHS • Classification criteria not met
STOT-RE		EU/CLP • Classification criteria not met UN GHS • Classification criteria not met
STOT-SE		EU/CLP • Classification criteria not met UN GHS • Classification criteria not met
Toxicity for Reproduction		EU/CLP • Classification criteria not met UN GHS • Classification criteria not met
Respiratory sensitization		EU/CLP • Classification criteria not met UN GHS • Classification criteria not met
Serious eye damage/Irritation		EU/CLP • Classification criteria not met UN GHS • Classification criteria not met

### Potential Health Effects

#### Inhalation

##### Acute (Immediate)

- Under normal conditions of use, no health effects are expected.

##### Chronic (Delayed)

- No data available

#### Skin

<b>Acute (Immediate)</b>	<ul style="list-style-type: none"><li>• Under normal conditions of use, no health effects are expected.</li></ul>
<b>Chronic (Delayed)</b>	<ul style="list-style-type: none"><li>• No data available</li></ul>
<b>Eye</b>	
<b>Acute (Immediate)</b>	<ul style="list-style-type: none"><li>• Under normal conditions of use, no health effects are expected.</li></ul>
<b>Chronic (Delayed)</b>	<ul style="list-style-type: none"><li>• No data available</li></ul>
<b>Ingestion</b>	
<b>Acute (Immediate)</b>	<ul style="list-style-type: none"><li>• Under normal conditions of use, no health effects are expected.</li></ul>
<b>Chronic (Delayed)</b>	<ul style="list-style-type: none"><li>• No data available</li></ul>
<b>Mutagenic Effects</b>	<ul style="list-style-type: none"><li>• The components of this gas mixture are not reported to cause mutagenic effects in humans.</li></ul>
<b>Carcinogenic Effects</b>	<ul style="list-style-type: none"><li>• The components of this gas mixture are not found on the following lists: FEDERAL OSHA Z LIST, NTP and IARC; therefore, they are not considered to be, nor suspected to be, cancer-causing agents by these agencies.</li></ul>
<b>Reproductive Effects</b>	<ul style="list-style-type: none"><li>• There is no information on the potential human mutagenic, embryotoxic, teratogenic or reproductive effects of the components of this product.</li></ul>

## Section 12 - Ecological Information

### 12.1 Toxicity

- Material data lacking. This gas mixture is not expected to cause significant harm to terrestrial or aquatic organisms.

### 12.2 Persistence and degradability

- This gas mixture has not been tested for persistence. If released to air, a vapor pressure of  $4.7 \times 10^5$  mm Hg at 25°C indicates the Methane component will exist solely in the gas phase in the ambient atmosphere. Gas-phase Methane will be very slowly degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be about 6 years. This gas mixture has not been tested for biodegradation. The biodegradation half life of the Methane component was estimated to range from 70 days to infinity based on gas exchange biodegradation experiments conducted in model estuarine ecosystems. Hydrolysis is not expected to be an important environmental fate process since Methane lacks functional groups that hydrolyze under environmental conditions.

### 12.3 Bioaccumulative potential

- No component of this gas mixture presents a hazard of bioconcentration.

### 12.4 Mobility in Soil

- This gas mixture has not been tested for mobility in soil. If released to soil, methane is expected to volatilize from soil (both moist and dry) based upon its vapor pressure and an estimated Henry's Law constant of 0.66 atm-cu m/mole. Utilization of methane by soil microorganisms has been detected from soil samples. If released into water, volatilization from water surfaces is expected to be the dominant fate process based upon this compound's estimated Henry's Law constant. Estimated volatilization half-lives for a model river and model lake are both 2 hrs. Methane is not expected to adsorb to suspended solids and sediment based upon the estimated Koc.

### 12.5 Results of PBT and vPvB assessment

- PBT and vPvB assessment has not been conducted.

### 12.6 Other adverse effects

- Components are not Class I or Class II ozone depleting chemicals (40 CFR Part 82).

## Section 13 - Disposal Considerations

### 13.1 Waste treatment methods

#### Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

#### Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

## Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN1956	Compressed gas, n.o.s (Air, Methane)	2.2	NDA	NDA
TDG	UN1956	COMPRESSED GAS, N.O.S. (Air, Methane)	2.2	NDA	Potential Marine Pollutant
IMO/IMDG	UN1956	COMPRESSED GAS, N.O.S. (AIR, METHANE)	2.2	NDA	NDA
IATA/ICAO	UN1956	Compressed Gas, n.o.s. (Air, Methane)	2.2	NDA	NDA

#### 14.6 Special precautions for user

- Cylinders should be transported in a secure position, in a well-ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards. If transporting these cylinders in vehicles, ensure these cylinders are not exposed to extremely high temperatures (as may occur in an enclosed vehicle on a hot day). Additionally, the vehicle should be well-ventilated during transportation.

#### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- This product is provided only in non-bulk containers.

## Section 15 - Regulatory Information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

State Right To Know				
Component	CAS	MA	NJ	PA
Methane	74-82-8	Yes	Yes	Yes
Ethane	74-84-0	Yes	Yes	Yes
Propane	74-98-6	Yes	Yes	Yes
Butane	106-97-8	Yes	Yes	Yes
Air - compressed, atmospheric	132259-10-0	No	No	No

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Methane	74-82-8	Yes	No	Yes	Yes	No
Ethane	74-84-0	Yes	No	Yes	Yes	No
Propane	74-98-6	Yes	No	Yes	Yes	No
Butane	106-97-8	Yes	No	Yes	Yes	No
Air - compressed, atmospheric	132259-10-0	No	No	Yes	No	No

  

Inventory (Con't.)				
Component	CAS	Japan ENCS	Korea KECL	TSCA
Methane	74-82-8	Yes	Yes	Yes
Ethane	74-84-0	Yes	Yes	Yes
Propane	74-98-6	Yes	Yes	Yes
Butane	106-97-8	Yes	Yes	Yes
Air - compressed, atmospheric	132259-10-0	No	No	No

## Australia

### Labor

#### Australia - Hazardous Substances - Substances Requiring Health Surveillance

- Air - compressed, atmospheric 132259-10-0 na Not Listed
- Ethane 74-84-0 0% TO 0.25% Not Listed
- Propane 74-98-6 0% TO 0.0475% Not Listed
- Butane 106-97-8 0% TO 0.025% Not Listed
- Methane 74-82-8 0% TO 2.2% Not Listed

#### Australia - High Volume Industrial Chemicals List

- Air - compressed, atmospheric 132259-10-0 na Not Listed
- Ethane 74-84-0 0% TO 0.25% Not Listed
- Propane 74-98-6 0% TO 0.0475% Not Listed
- Butane 106-97-8 0% TO 0.025%
- Methane 74-82-8 0% TO 2.2% Not Listed

#### Australia - List of Designated Hazardous Substances - Classification

- Air - compressed, atmospheric 132259-10-0 na Not Listed
- Ethane 74-84-0 0% TO 0.25% F+ R12
- Propane 74-98-6 0% TO 0.0475% F+ R12
- Butane 106-97-8 0% TO 0.025% F+ R12
- Methane 74-82-8 0% TO 2.2% F+ R12

### Environment

#### Australia - National Pollutant Inventory (NPI) Substance List

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**Australia - Ozone Protection Act - Scheduled Substances**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**Australia - Priority Existing Chemical Program**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**Canada**

**Labor**

**Canada - WHMIS - Classifications of Substances**

• Air - compressed, atmospheric	132259-10-0	na	A
• Ethane	74-84-0	0% TO 0.25%	A, B1
• Propane	74-98-6	0% TO 0.0475%	A, B1
• Butane	106-97-8	0% TO 0.025%	A, B1
• Methane	74-82-8	0% TO 2.2%	A, B1

**Canada - WHMIS - Ingredient Disclosure List**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	1 %
• Methane	74-82-8	0% TO 2.2%	Not Listed

**Environment**

**Canada - CEPA - Priority Substances List**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
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• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

## Europe

### Other

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	F+; R12
• Propane	74-98-6	0% TO 0.0475%	F+; R12
• Butane	106-97-8	0% TO 0.025%	F+; R12
• Methane	74-82-8	0% TO 2.2%	F+; R12

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	F+ R:12 S:(2)-9-16-33
• Propane	74-98-6	0% TO 0.0475%	F+ R:12 S:(2)-9-16
• Butane	106-97-8	0% TO 0.025%	F+ R:12 S:(2)-9-16
• Methane	74-82-8	0% TO 2.2%	F+ R:12 S:(2)-9-16-33

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	C
• Methane	74-82-8	0% TO 2.2%	Not Listed

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	S:(2)-9-16-33
• Propane	74-98-6	0% TO 0.0475%	S:(2)-9-16
• Butane	106-97-8	0% TO 0.025%	S:(2)-9-16
• Methane	74-82-8	0% TO 2.2%	S:(2)-9-16-33

## Mexico

### Other

#### Mexico - Hazard Classifications

• Air - compressed, atmospheric	132259-10-0	na	Class = 2.2, 5.1 UN1003; Class = 2.2 UN1002
• Ethane	74-84-0	0% TO 0.25%	Class = 2.1 UN1035, UN1961
• Propane	74-98-6	0% TO 0.0475%	Class = 2.1
• Butane	106-97-8	0% TO 0.025%	Class = 2.1
• Methane	74-82-8	0% TO 2.2%	Class = 2.1 UN1971, UN1972

#### Mexico - Regulated Substances

• Air - compressed, atmospheric	132259-10-0	na	UN1003 (refrigerated liquid); UN1002 (compressed)
• Ethane	74-84-0	0% TO 0.25%	UN1961 (refrigerated liquid); UN1035
• Propane	74-98-6	0% TO 0.0475%	UN1978
• Butane	106-97-8	0% TO 0.025%	UN1011
• Methane	74-82-8	0% TO 2.2%	UN1972 (refrigerated liquid); UN1971 (compressed)

## United States

### Labor

#### U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

#### U.S. - OSHA - Specifically Regulated Chemicals

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

### Environment

#### U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed

- Methane 74-82-8 0% TO 2.2% Not Listed

**U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities**

- Air - compressed, atmospheric 132259-10-0 na Not Listed
- Ethane 74-84-0 0% TO 0.25% Not Listed
- Propane 74-98-6 0% TO 0.0475% Not Listed
- Butane 106-97-8 0% TO 0.025% Not Listed
- Methane 74-82-8 0% TO 2.2% Not Listed

**U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities**

- Air - compressed, atmospheric 132259-10-0 na Not Listed
- Ethane 74-84-0 0% TO 0.25% Not Listed
- Propane 74-98-6 0% TO 0.0475% Not Listed
- Butane 106-97-8 0% TO 0.025% Not Listed
- Methane 74-82-8 0% TO 2.2% Not Listed

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs**

- Air - compressed, atmospheric 132259-10-0 na Not Listed
- Ethane 74-84-0 0% TO 0.25% Not Listed
- Propane 74-98-6 0% TO 0.0475% Not Listed
- Butane 106-97-8 0% TO 0.025% Not Listed
- Methane 74-82-8 0% TO 2.2% Not Listed

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs**

- Air - compressed, atmospheric 132259-10-0 na Not Listed
- Ethane 74-84-0 0% TO 0.25% Not Listed
- Propane 74-98-6 0% TO 0.0475% Not Listed
- Butane 106-97-8 0% TO 0.025% Not Listed
- Methane 74-82-8 0% TO 2.2% Not Listed

**U.S. - CERCLA/SARA - Section 313 - Emission Reporting**

- Air - compressed, atmospheric 132259-10-0 na Not Listed
- Ethane 74-84-0 0% TO 0.25% Not Listed
- Propane 74-98-6 0% TO 0.0475% Not Listed
- Butane 106-97-8 0% TO 0.025% Not Listed
- Methane 74-82-8 0% TO 2.2% Not Listed

**U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing**

- Air - compressed, atmospheric 132259-10-0 na Not Listed
- Ethane 74-84-0 0% TO 0.25% Not Listed

- Propane 74-98-6 0% TO 0.0475% Not Listed
- Butane 106-97-8 0% TO 0.025% Not Listed
- Methane 74-82-8 0% TO 2.2% Not Listed

**U.S. - EPA - Designated Generic Categories - Aqueous Ammonia**

- Air - compressed, atmospheric 132259-10-0 na Not Listed
- Ethane 74-84-0 0% TO 0.25% Not Listed
- Propane 74-98-6 0% TO 0.0475% Not Listed
- Butane 106-97-8 0% TO 0.025% Not Listed
- Methane 74-82-8 0% TO 2.2% Not Listed

**U.S. - EPA - Designated Generic Categories - Certain Glycol Ethers**

- Air - compressed, atmospheric 132259-10-0 na Not Listed
- Ethane 74-84-0 0% TO 0.25% Not Listed
- Propane 74-98-6 0% TO 0.0475% Not Listed
- Butane 106-97-8 0% TO 0.025% Not Listed
- Methane 74-82-8 0% TO 2.2% Not Listed

**U.S. - EPA - Designated Generic Categories - Chlorophenols**

- Air - compressed, atmospheric 132259-10-0 na Not Listed
- Ethane 74-84-0 0% TO 0.25% Not Listed
- Propane 74-98-6 0% TO 0.0475% Not Listed
- Butane 106-97-8 0% TO 0.025% Not Listed
- Methane 74-82-8 0% TO 2.2% Not Listed

**U.S. - EPA - Designated Generic Categories - Dioxins and Dioxin-like Compounds**

- Air - compressed, atmospheric 132259-10-0 na Not Listed
- Ethane 74-84-0 0% TO 0.25% Not Listed
- Propane 74-98-6 0% TO 0.0475% Not Listed
- Butane 106-97-8 0% TO 0.025% Not Listed
- Methane 74-82-8 0% TO 2.2% Not Listed

**U.S. - EPA - Designated Generic Categories - Ethylenebisdithiocarbamic Acid, Salts and Esters**

- Air - compressed, atmospheric 132259-10-0 na Not Listed
- Ethane 74-84-0 0% TO 0.25% Not Listed
- Propane 74-98-6 0% TO 0.0475% Not Listed
- Butane 106-97-8 0% TO 0.025% Not Listed
- Methane 74-82-8 0% TO 2.2% Not Listed

**U.S. - EPA - Designated Generic Categories - Lead and Lead Compounds**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - EPA - Designated Generic Categories - Nicotine and Salts**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - EPA - Designated Generic Categories - Nitrate Compounds**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - EPA - Designated Generic Categories - Pesticides and Other PBTs**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - EPA - Designated Generic Categories - Polychlorinated Alkanes**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - EPA - Designated Generic Categories - Polycyclic Aromatic Compounds**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - EPA - Designated Generic Categories - Strychnine and Salts**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - EPA - Designated Generic Categories - Warfarin and Salts**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - D Series Wastes - Max Conc of Contaminants for the Tox Characteristic**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - F Series Wastes - Wastes from Nonspecific Sources**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - K Series Wastes - Wastes from Specified Sources**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - P Series Wastes - Acutely Toxic Wastes**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Part 268 Appendix III - Halogenated Organic Compounds (HOCs)**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed

• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Waste Minimization Priority Chemicals**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**United States - California**

**Environment**

**U.S. - California - Proposition 65 - Carcinogens List**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

**U.S. - California - Proposition 65 - Developmental Toxicity**

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

### U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

### U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

### U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

### U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

## United States - Pennsylvania

### Labor

#### U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

#### U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Not Listed
• Propane	74-98-6	0% TO 0.0475%	Not Listed
• Butane	106-97-8	0% TO 0.025%	Not Listed
• Methane	74-82-8	0% TO 2.2%	Not Listed

## United States - Rhode Island

### Labor

#### U.S. - Rhode Island - Hazardous Substance List

• Air - compressed, atmospheric	132259-10-0	na	Not Listed
• Ethane	74-84-0	0% TO 0.25%	Toxic
• Propane	74-98-6	0% TO 0.0475%	Toxic; Flammable
• Butane	106-97-8	0% TO 0.025%	Toxic; Flammable
• Methane	74-82-8	0% TO 2.2%	Toxic

## 15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

## Section 16 - Other Information

<b>Last Revision Date</b>	<ul style="list-style-type: none"><li>• 10/August/2012</li></ul>
<b>Preparation Date</b>	<ul style="list-style-type: none"><li>• 10/August/2012</li></ul>
<b>Disclaimer/Statement of Liability</b>	<ul style="list-style-type: none"><li>• To the best of Air Liquide's 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.</li></ul>