

## Safety Data Sheet



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

#### 1.1 Product identifier

**Product Name** • Carbon Dioxide (0.51 - 20%), Nitric Oxide (0.0001 - 0.0025%), Nitrogen (Balance)

**Product Code** • M-0005025/E-1

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

**Relevant identified use(s)** • Please provide product use

#### 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  
sds@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 Regulation (EC) No 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** • Protect from sunlight when ambient temperature exceeds 125°F (52°C)  
P403 - Store in a well-ventilated place.

**DSD/DPD**

- Risk phrases** • No label element(s) required

## 2.3 Other Hazards

**CLP**

- This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces.  
Inhalation of carbon dioxide can increase respiration and heart rate.  
According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

**DSD/DPD**

- This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces.  
Inhalation of carbon dioxide can increase respiration and heart rate.  
According to European Directive 1999/45/EC this preparation is not considered dangerous.

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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 2012**

- Compressed Gas - H280  
Simple Asphyxiant

### 2.2 Label elements

**OSHA HCS 2012**

**WARNING**



- Hazard statements** • Contains gas under pressure; may explode if heated - H280  
May displace oxygen and cause rapid suffocation.

**Precautionary statements**

- Storage/Disposal** • Protect from sunlight when ambient temperature exceeds 125°F (52°C)  
Store in a well-ventilated place. - P403

### 2.3 Other hazards

**OSHA HCS 2012**

- Inhalation of carbon dioxide can increase respiration and heart rate. 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**

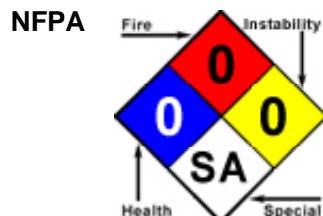


- Compressed Gas - A

### 2.3 Other hazards

**WHMIS**

- This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces. Inhalation of carbon dioxide can increase respiration and heart rate. In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

**2.4 Other information****Section 3 - Composition/Information on Ingredients****3.1 Substances**

- Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

**3.2 Mixtures**

Composition				
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive
Carbon dioxide	CAS:124-38-9 EC Number:204-696-9	0.51% TO 20%	Inhalation-Rat LC50 • 470000 ppm 30 Minute(s)	EU DSD/DPD: Not Classified EU CLP: Self Classified: Press. Gas - Comp., H280 OSHA HCS 2012: Press. Gas - Comp.; Simp. Asphyx.
Nitrogen monoxide	CAS:10102-43-9 EINECS:233-271-0	0.0001% TO 0.0025%	Inhalation-Rat LC50 • 160 mg/m <sup>3</sup>	EU DSD/DPD: Self Classified: O, R8, T+, R26, C, R34 EU CLP: Self Classified: Ox. Gas 1, H270; Press Gas - Comp., H280; Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 1, H330; STOT SE 1 (Lung, Blood (Methemoglobin former)), H370 OSHA HCS 2012: Press Gas - Comp; Ox. Gas 1; Skin Corr. 1; Eye Dam. 1; Acute Tox. 1 (Inhl); STOT SE 1 (Lung, Blood (Methemoglobin former))
Nitrogen	CAS:7727-37-9 EINECS:231-783-9	79.9975% TO 99.4899%	NDA	EU DSD/DPD: Not Classified EU CLP: Self Classified: Press. Gas - Comp., H280 OSHA HCS 2012: Press. Gas - Comp.; Simp. Asphyx.

See Section 16 for full text of H-statements and R-phrases.

**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. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

**Skin**

- Although exposure is unlikely, in case of contact immediately flush skin with running water. If skin irritation develops get medical advice/attention.

- Eye**
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If irritation develops and persists, get medical attention.
- Ingestion**
- Ingestion is not considered a potential route of exposure.

## 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

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. A potential health hazard associated with this gas is anoxia.

## 4.4 Other information

- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. RESCUERS SHOULD NOT ATTEMPT TO RETRIEVE VICTIMS OF EXPOSURE TO GASES WITHOUT ADEQUATE PERSONAL PROTECTIVE EQUIPMENT. At a minimum, Self-Contained Breathing Apparatus must be worn. Victim(s) who experience any adverse effect after over-exposure to this gas mixture must be taken for medical attention. Rescuers should be taken for medical attention if necessary. Take a copy of the label and the MSDS to physician or other health professional with victim(s).

## Section 5 - Firefighting Measures

### 5.1 Extinguishing media

**Suitable Extinguishing Media** • Use extinguishing agent suitable for type of surrounding fire.

**Unsuitable Extinguishing Media** • No data available

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

**Unusual Fire and Explosion Hazards** • Containers may explode when heated.  
Ruptured cylinders may rocket.

**Hazardous Combustion Products** • No data available

### 5.3 Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.  
Wear positive pressure self-contained breathing apparatus (SCBA).  
Move containers from fire area if you can do it without risk.  
FIRE: If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.  
FIRE INVOLVING TANKS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.  
FIRE INVOLVING TANKS: Cool containers with flooding quantities of water until well after fire is out.  
FIRE INVOLVING TANKS: Do not direct water at source of leak or safety devices; icing may occur.  
FIRE INVOLVING TANKS: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.  
FIRE INVOLVING TANKS: ALWAYS stay away from tanks engulfed in fire.

## Section 6 - Accidental Release Measures

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

**Personal Precautions** • Ventilate the area before entry. Do not walk through spilled material. Do not touch

- Emergency Procedures**
- damaged containers or spilled material unless wearing appropriate protective clothing.
  - Keep unauthorized personnel away. Keep out of low areas. Stay upwind. Do not direct water at spill or source of leak. **LARGE SPILL:** Consider initial downwind evacuation for at least 500 meters (1/3 mile)

## 6.2 Environmental precautions

- Prevent spreading of vapors through sewers, ventilation systems and confined areas.

## 6.3 Methods and material for containment and cleaning up

### Containment/Clean-up Measures

- Stop leak if you can do it without risk.  
Ventilate the area.  
Isolate area until gas has dispersed.  
Use water spray to reduce vapors; do not put water directly on leak, spill area or inside container.  
If possible, turn leaking containers so that gas escapes rather than liquid.

## 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 only with adequate ventilation. Ventilate closed spaces before entering. Be aware of any signs of dizziness or fatigue, especially if work is done in a poorly ventilated area; exposures to fatal concentrations of this gas mixture could occur without any significant warning symptoms, due to olfactory fatigue or oxygen deficiency. 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. Empty containers retain product residue and can be hazardous. Do not cut, weld, puncture or incinerate container.

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

#### Storage

- Store in a cool, dry, well-ventilated place. Protect cylinders against physical damage. Cylinders should be firmly secured to prevent falling or being knocked-over. Do not allow area where cylinders are stored to exceed 52C (125F).

### 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	China	Europe
Nitrogen monoxide (10102-43-9)	STELs	Not established	Not established	Not established	30 mg/m3 STEL	Not established
	TWAs	25 ppm TWA	25 ppm TWA	25 ppm TWAEV; 31 mg/m3 TWAEV	15 mg/m3 TWA	Not established
Carbon dioxide (124-38-9)	TWAs	5000 ppm TWA	5000 ppm TWA	5000 ppm TWAEV; 9000 mg/m3 TWAEV	9000 mg/m3 TWA	5000 ppm TWA; 9000 mg/m3 TWA
	STELs	30000 ppm STEL	30000 ppm STEL	30000 ppm STEV; 54000 mg/m3 STEV	18000 mg/m3 STEL	Not established

Exposure Limits/Guidelines (Con't.)						
	Result	France	Germany DFG	Germany TRGS	Ireland	Israel
Nitrogen monoxide (10102-43-9)	TWAs	25 ppm TWA [VME]; 30 mg/m3 TWA [VME]	Not established	Not established	25 ppm TWA; 30 mg/m3 TWA	25 ppm TWA
	STELs	Not established	Not established	Not established	35 ppm STEL; 45 mg/m3 STEL	Not established
	Ceilings	Not established	1 ppm Peak; 1.26 mg/m3 Peak	Not established	Not established	Not established
	MAKs	Not established	0.5 ppm TWA MAK; 0.63 mg/m3 TWA MAK	Not established	Not established	Not established
Carbon dioxide (124-38-9)	TWAs	5000 ppm TWA [VME] (indicative limit); 9000 mg/m3 TWA [VME] (indicative limit)	Not established	5000 ppm TWA AGW (exposure factor 2); 9100 mg/m3 TWA AGW (exposure factor 2)	5000 ppm TWA; 9000 mg/m3 TWA	5000 ppm TWA
	STELs	Not established	Not established	Not established	Not established	30000 ppm STEL
	Ceilings	Not established	10000 ppm Peak; 18200 mg/m3 Peak	Not established	Not established	Not established
	MAKs	Not established	5000 ppm TWA MAK; 9100 mg/m3 TWA MAK	Not established	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Italy	NIOSH	OSHA	OSHA Vacated	Portugal
Nitrogen monoxide (10102-43-9)	TWAs	Not established	25 ppm TWA; 30 mg/m3 TWA	25 ppm TWA; 30 mg/m3 TWA	25 ppm TWA; 30 mg/m3 TWA	25 ppm TWA [VLE- MP]
Carbon dioxide (124-38-9)	STELs	Not established	30000 ppm STEL; 54000 mg/m3 STEL	Not established	30000 ppm STEL; 54000 mg/m3 STEL	30000 ppm STEL [VLE-CD]
	TWAs	5000 ppm TWA; 9000 mg/m3 TWA	5000 ppm TWA; 9000 mg/m3 TWA	5000 ppm TWA; 9000 mg/m3 TWA	10000 ppm TWA; 18000 mg/m3 TWA	5000 ppm TWA [VLE- MP]
Exposure Limits/Guidelines (Con't.)						
	Result	Spain	Sweden			
Nitrogen monoxide (10102-43-9)	TWAs	25 ppm TWA [VLA-ED]; 31 mg/m3 TWA [VLA- ED]	25 ppm LLV; 30 mg/m3 LLV			
	STELs	Not established	50 ppm STV; 60 mg/m3 STV			
Carbon dioxide (124-38-9)	TWAs	5000 ppm TWA [VLA- ED] (indicative limit value); 9150 mg/m3 TWA [VLA-ED] (indicative limit value)	5000 ppm LLV; 9000 mg/m3 LLV			
	STELs	Not established	10000 ppm STV; 18000 mg/m3 STV			

## Exposure Control Notations

### Portugal

•Nitrogen (7727-37-9): **Simple Asphyxiants:** (Simple Asphyxiant)

### Ireland

•Nitrogen (7727-37-9): **Simple Asphyxiants:** (Asphyxiant)

### Spain

•Nitrogen (7727-37-9): **Simple Asphyxiants:** (simple asphyxiant)

**Germany DFG**

•Nitrogen monoxide (10102-43-9): **Pregnancy:** (classification not yet possible)

**8.2 Exposure controls****Engineering Measures/Controls**

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Personal Protective Equipment****Respiratory**

- 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 leather gloves when handling cylinders.

**Environmental Exposure Controls**

- Follow best practice for site management and disposal of waste. Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

**Key to abbreviations**

LLV = Limit Level Value is the exposure limit for 8-hour work day  
 MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration  
 STEV = Short Term Exposure Value  
 TWAEV = Time-Weighted Average Exposure Value  
 TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

ACGIH = American Conference of Governmental Industrial Hygiene  
 NIOSH = National Institute of Occupational Safety and Health  
 OSHA = Occupational Safety and Health Administration  
 STEL = Short Term Exposure Limits are based on 15-minute exposures  
 TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

**Section 9 - Physical and Chemical Properties****9.1 Information on Physical and Chemical Properties**

<b>Material Description</b>			
Physical Form	Gas	Appearance/Description	Colorless gas with no odor.
Color	Colorless	Odor	Odorless
Odor Threshold	Data lacking		
<b>General Properties</b>			
Boiling Point	-196 C(-320.8 F) Nitrogen	Melting Point	-210 C(-346 F) Nitrogen
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	0.967 Water=1 Nitrogen	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Not explosive.
Oxidizing Properties:	Not an oxidizer.		
<b>Volatility</b>			
Vapor Pressure	Data lacking	Vapor Density	0.97 Air=1 Nitrogen
Evaporation Rate	Data lacking		
<b>Flammability</b>			
Flash Point	Data lacking	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Not flammable.		
<b>Environmental</b>			



Octanol/Water Partition coefficient	Data lacking		
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## 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.

### 10.5 Incompatible materials

- Carbon dioxide, being weakly acidic, reacts with alkaline materials to form carbonates and bicarbonates. Reacts with organic and reducing materials. Nitrogen reacts with Li, Nd, and Ti at high temperatures.

### 10.6 Hazardous decomposition products

- In contact with air nitric oxide forms toxic fumes of NOx.

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

Components		
Carbon dioxide (0.51% TO 20%)	124-38-9	<b>Acute Toxicity:</b> Inhalation-Rat LC50 • 470000 ppm 30 Minute(s); <b>Reproductive:</b> Inhalation-Rat TCLo • 6 pph 24 Hour(s)(10D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system; Reproductive Effects:Specific Developmental Abnormalities:Cardiovascular (circulatory) system; Reproductive Effects:Specific Developmental Abnormalities:Respiratory system</i>
Nitrogen monoxide (0.0001% TO 0.0025%)	10102-43-9	<b>Acute Toxicity:</b> Inhalation-Rat LC50 • 160 mg/m <sup>3</sup> ; <b>Mutagen:</b> Mutation in Mammalian Somatic Cells • Inhalation-Rat • 27 ppm 3 Hour(s)-Continuous

GHS Properties	Classification
Acute toxicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Carcinogenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met



<b>Skin corrosion/Irritation</b>	<b>EU/CLP</b> • Classification criteria not met <b>OSHA HCS 2012</b> • Classification criteria not met
<b>Skin sensitization</b>	<b>EU/CLP</b> • Classification criteria not met <b>OSHA HCS 2012</b> • Classification criteria not met
<b>STOT-RE</b>	<b>EU/CLP</b> • Classification criteria not met <b>OSHA HCS 2012</b> • Classification criteria not met
<b>STOT-SE</b>	<b>EU/CLP</b> • Classification criteria not met <b>OSHA HCS 2012</b> • Classification criteria not met
<b>Toxicity for Reproduction</b>	<b>EU/CLP</b> • Classification criteria not met <b>OSHA HCS 2012</b> • Classification criteria not met
<b>Respiratory sensitization</b>	<b>EU/CLP</b> • Classification criteria not met <b>OSHA HCS 2012</b> • Classification criteria not met
<b>Serious eye damage/Irritation</b>	<b>EU/CLP</b> • Classification criteria not met <b>OSHA HCS 2012</b> • Classification criteria not met

## Potential Health Effects

### Inhalation

#### Acute (Immediate)

- This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces. If this material is released in a small, poorly ventilated area (i.e. an enclosed or confined space), an oxygen-deficient environment may occur. Individuals breathing such an atmosphere may experience symptoms which include headaches, ringing in ears, dizziness, drowsiness, unconsciousness, nausea, vomiting, and depression of all the senses. Under some circumstances of over-exposure, death may occur. The following effects associated with decreased levels of oxygen: increase in breathing and pulse rate, emotional upset, abnormal fatigue, nausea, vomiting, collapse, loss of consciousness, convulsive movements, respiratory collapse and death. Inhalation of carbon dioxide can increase respiration and heart rate.

#### Chronic (Delayed)

- No data available

### Skin

#### Acute (Immediate)

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

#### Chronic (Delayed)

- No data available

### Eye

#### Acute (Immediate)

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

#### Chronic (Delayed)

- No data available

### Ingestion

#### Acute (Immediate)

- Ingestion is not anticipated to be a likely route of exposure to this product.

#### Chronic (Delayed)

- No data available

#### Key to abbreviations

LC = Lethal Concentration

TC = Toxic Concentration

## Section 12 - Ecological Information

### 12.1 Toxicity

- Material data lacking.

### 12.2 Persistence and degradability

- Material data lacking.

## 12.3 Bioaccumulative potential

- Material data lacking.

## 12.4 Mobility in Soil

- Material data lacking.

## 12.5 Results of PBT and vPvB assessment

- PBT and vPvB assessment has not been conducted for this material.

## 12.6 Other adverse effects

- No studies have been found.

## 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. (Nitrogen, Carbon Dioxide)	2.2	NDA	NDA
TDG	UN1956	COMPRESSED GAS, N.O.S. (Nitrogen, Carbon Dioxide)	2.2	NDA	NDA
IMO/IMDG	UN1956	COMPRESSED GAS, N.O.S. (Nitrogen, Carbon Dioxide)	2.2	NDA	NDA
IATA/ICAO	UN1956	Compressed gas, n.o.s. (Nitrogen, Carbon Dioxide)	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

- Not relevant.

### 14.8 Other information

- DOT** • Nitric Oxide has a reportable quantity of 10 lbs (4.54 kg) as listed in Appendix A to 49 CFR 172.101.

## Section 15 - Regulatory Information

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

**SARA Hazard Classifications** • Pressure(Sudden Release of), Acute

State Right To Know				
Component	CAS	MA	NJ	PA
Carbon dioxide	124-38-9	Yes	Yes	Yes
Nitrogen	7727-37-9	Yes	Yes	Yes
Nitrogen monoxide	10102-43-9	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Carbon dioxide	124-38-9	Yes	No	Yes	Yes	No
Nitrogen	7727-37-9	Yes	No	Yes	Yes	No
Nitrogen monoxide	10102-43-9	Yes	No	Yes	Yes	No

Inventory (Con't.)		
Component	CAS	TSCA
Carbon dioxide	124-38-9	Yes
Nitrogen	7727-37-9	Yes
Nitrogen monoxide	10102-43-9	Yes

**Canada****Labor****Canada - WHMIS - Classifications of Substances**

• Nitrogen monoxide	10102-43-9	A, C, D1A, E
• Carbon dioxide	124-38-9	A; Uncontrolled product according to WHMIS classification criteria (solid)
• Nitrogen	7727-37-9	A

**Canada - WHMIS - Ingredient Disclosure List**

• Nitrogen monoxide	10102-43-9	1 %
• Carbon dioxide	124-38-9	1 %
• Nitrogen	7727-37-9	Not Listed

**Environment****Canada - CEPA - Priority Substances List**

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

**China****Environment****China - Ozone Depleting Substances - First Schedule**

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

**China - Ozone Depleting Substances - Second Schedule**

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

**China - Ozone Depleting Substances - Third Schedule**

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

**Other****China - Annex I & II - Controlled Chemicals Lists**

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

**China - Dangerous Goods List**

• Nitrogen monoxide	10102-43-9	
• Carbon dioxide	124-38-9	(including solid or refrigerated liquid)
• Nitrogen	7727-37-9	(compressed or refrigerated liquid)

**China - Export Control List - Part I Chemicals**

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

**Europe****Other****EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification**

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

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

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

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

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

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

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

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

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

**Germany****Environment****Germany - TA Luft - Types and Classes**

• Nitrogen monoxide	10102-43-9	inorganic gas Substance: 5.2.4, Class IV
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
<b>Germany - Water Classification (VwVwS) - Annex 1</b>		
• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	ID Number 256, not considered hazardous to water
• Nitrogen	7727-37-9	ID Number 1351, not considered hazardous to water
<b>Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes</b>		
• Nitrogen monoxide	10102-43-9	ID Number 285, hazard class 1 - low hazard to waters
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
<b>Germany - Water Classification (VwVwS) - Annex 3</b>		
• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

**Other****Germany - Specifically Regulated Chemicals in TRGS**

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

**Portugal****Other****Portugal - Prohibited Substances**

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

**United Kingdom****Environment****United Kingdom - Pollution Inventory - Schedule 1 - Thresholds for Releases to Air**

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	10000000 kg (qualifying renewable fuel sources are reportable when the total amount of CO2 released is above 10 million kg); 10000000 kg
• Nitrogen	7727-37-9	Not Listed

**Other****United Kingdom - Workplace Exposure Limits (WELs) - Substances in Review**

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

**United Kingdom - List of Dangerous Substances in Water**

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

**United States****Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

• Nitrogen monoxide	10102-43-9	250 lb TQ
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

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

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

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

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

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

• Nitrogen monoxide	10102-43-9	10 lb final RQ (releases to the air in amounts <1000 pounds per 24 hours which are the result of combustion and combustion-related activities are exempt from the notification requirements per 40 CFR 302.6); 4.54 kg final RQ (releases to the air in amounts <1000 pounds per 24 hours which are the result of combustion and combustion-related activities are exempt from the notification requirements per 40 CFR 302.6)
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

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

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

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

• Nitrogen monoxide	10102-43-9	10 lb EPCRA RQ (Releases to the air in amounts <1000 pounds per 24 hours which are the result of combustion and combustion-related activities are exempt from the
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		notification requirements per 40 CFR 355.31)
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
<b>U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs</b>		
• Nitrogen monoxide	10102-43-9	100 lb TPQ
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
<b>U.S. - CERCLA/SARA - Section 313 - Emission Reporting</b>		
• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
<b>U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing</b>		
• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

## United States - California

### Environment

<b>U.S. - California - Proposition 65 - Carcinogens List</b>		
• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
<b>U.S. - California - Proposition 65 - Developmental Toxicity</b>		
• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
<b>U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)</b>		
• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
<b>U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)</b>		
• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
<b>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</b>		
• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
<b>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</b>		
• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

## United States - Pennsylvania



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

• Nitrogen monoxide	10102-43-9	
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

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

• Nitrogen monoxide	10102-43-9	Not Listed
• Carbon dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

**15.2 Chemical Safety Assessment**

- No Chemical Safety Assessment has been carried out.

**Section 16 - Other Information****Relevant Phrases (code & full text)**

- H314 - Causes severe skin burns and eye damage.  
H318 - Causes serious eye damage  
H330 - Fatal if inhaled  
H370 - Causes damage to organs.  
R8 - Contact with combustible material may cause fire.  
R26 - Very toxic by inhalation.  
R34 - Causes burns.

**Last Revision Date**

- 09/September/2014

**Preparation Date**

- 09/September/2014

**Disclaimer/Statement of Liability**

- 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.

**Key to abbreviations**

NDA = No Data Available