# Safety Data Sheet

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

### 1.1 Product identifier

**Product Name**
- **Flammable Gas Mixture Containing the Following Component in a Nitrogen Balance Gas: Methane, 14.3 - > 99%; Carbon Dioxide, 0.0005 - 50.0%**

**Product Code**
- 50051

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

**Relevant identified use(s)**
- Calibration of Monitoring and Research Equipment

### 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**
- Flammable Gases 1 - H220
  Compressed Gas - H280

**DSD/DPD**
- Extremely Flammable (F+)

R12

### 2.2 Label Elements

**CLP**

**DANGER**

**Hazard statements** •
H220 - Extremely flammable gas
H280 - Contains gas under pressure; may explode if heated

**Precautionary statements**

**Prevention** • P210 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.

**Response** •
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - Eliminate all ignition sources if safe to do so.

**Storage/Disposal** • P403 - Store in a well-ventilated place.

**DSD/DPD**


**Risk phrases** • R12 - Extremely flammable.

**Safety phrases** •
S9 - Keep container in a well ventilated place
S16 - Keep away from sources of ignition - No Smoking.

## 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 considered dangerous.

# United States (US)

**According to OSHA 29 CFR 1910.1200 HCS**

## 2.1 Classification of the substance or mixture

**OSHA HCS 2012** •
Flammable Gases 1 - H220
Compressed Gas - H280
Simple Asphyxiant

## 2.2 Label elements

**OSHA HCS 2012**

**DANGER**

**Hazard statements** •
Extremely flammable gas - H220
Contains gas under pressure; may explode if heated - H280
May displace oxygen and cause rapid suffocation.

**Precautionary statements**

**Prevention** • Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking. - P210

**Response** •
Leaking gas fire: Do not extinguish, unless leak can be stopped safely. - P377
Eliminate all ignition sources if safe to do so. - P381

**Storage/Disposal** • 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.

## Canada
**According to WHMIS**

### 2.1 Classification of the substance or mixture
**WHMIS**

- Compressed Gas - A
  Flammable Gases - B1

### 2.2 Label elements
**WHMIS**

- Compressed Gas - A
  Flammable Gases - B1

### 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).

## 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** |
| Methane | **CAS:**74-82-8<br>**EINECS:**200-812-7 | 14.3% TO 100% | NDA | **EU DSD/DPD:** Annex VI, Table 3.2 - F+; R12<br>**EU CLP:** Annex VI, Table 3.1 - Flam. Gas 1, H220; Press. Gas. - Comp., H280<br>**OSHA HCS 2012:** Flam. Gas 1; Press. Gas - Comp; Simp. Asphyx. |
| Carbon dioxide | **CAS:**124-38-9<br>**EINECS:**204-696-9 | 0.0005% TO 50% | Inhalation-Rat LC50 • 470000 ppm 30 Minute(s) | **EU DSD/DPD:** Not Classified<br>**EU CLP:** Self Classified - Press. Gas - Comp., H280<br>**OSHA HCS 2012:** Press. Gas - Comp.; Simp. Asphyx. |
| Nitrogen | **CAS:**7727-37-9<br>**EINECS:**231-783-9 | Balance | NDA | **EU DSD/DPD:** Not Classified<br>**EU CLP:** Self Classified - Press. Gas - Comp., H280<br>**OSHA HCS 2012:** Press. Gas - Comp.; Simp. Asphyx. |

## 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 eye irritation persists: Get medical advice/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.

### 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**
- SMALL FIRES: Dry chemical or CO2.
  LARGE FIRES: Water spray or fog.

**Unsuitable Extinguishing Media**
- No data available

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

**Unusual Fire and Explosion Hazards**
- EXTREMELY FLAMMABLE
  Will form explosive mixtures with air.
  Vapors may travel to source of ignition and flash back.
  Cylinders exposed to fire may vent and release flammable gas through pressure relief devices.
  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).
  DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED
  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 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.
  FIRE INVOLVING TANKS: ALWAYS stay away from tanks engulfed in fire.
  FIRE INVOLVING TANKS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
  FIRE INVOLVING TANKS: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.

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: For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

## Section 6 - Accidental Release Measures

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

**Personal Precautions**

- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material. Ventilate the area before entry.

**Emergency Procedures**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). As an immediate precautionary measure, isolate spill or leak area for at least 100 meters (330 feet) in all directions. Stop leak if you can do it without risk. Keep unauthorized personnel away. Keep out of low areas. Stay upwind. LARGE SPILL: Consider initial downwind evacuation for at least 800 meters (1/2 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**

- All equipment used when handling the product must be grounded.
Stop leak if you can do it without risk.
If possible, turn leaking containers so that gas escapes rather than liquid.
Use water spray to reduce vapors; do not put water directly on leak, spill area or inside container.
Do not direct water at spill or source of leak.
Isolate area until gas has dispersed.

### 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**

- Keep away from heat and ignition sources – No Smoking. Take precautionary measures against static charges. All equipment used when handling the product must be grounded. Use only non-sparking tools. 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. Use explosion-proof - electrical, ventilating and/or lighting equipment. 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**

- 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 52C (125F). Cylinders must be protected from the environment, and preferably kept at room temperature approximately 21C (70F). Protect cylinders against physical damage. Cylinders should be firmly secured to prevent falling or being knocked-over. Store locked up.

### 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 |
| 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 |
| Methane (74-82-8) | TWAs | 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4) | 1000 ppm TWA | Not established | Not established | Not established |

| Exposure Limits/Guidelines (Con't.) | | | | | | |
|---|---|---|---|---|---|---|
| | Result | France | Germany DFG | Germany TRGS | Ireland | Israel |
| 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 |
| Methane (74-82-8) | TWAs | Not established | Not established | Not established | 1000 ppm TWA | 1000 ppm TWA (gas, listed under Aliphatic hydrocarbon gases: Alkane C1-4) |

| Exposure Limits/Guidelines (Con't.) | | | | | | |
|---|---|---|---|---|---|---|
| | Result | Italy | NIOSH | OSHA | OSHA Vacated | Portugal |
| 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] |
| Methane (74-82-8) | TWAs | Not established | Not established | Not established | Not established | 1000 ppm TWA [VLE-MP] |

| Exposure Limits/Guidelines (Con't.) | | | |
|---|---|---|---|
| | Result | Spain | Sweden |
| 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 |
| Methane (74-82-8) | TWAs | 1000 ppm TWA [VLA-ED] | Not established |

### Exposure Control Notations

**Portugal**

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

**Ireland**

•Methane (74-82-8): **Simple Asphyxiants:** (Asphyxiant)

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

**Spain**

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

## 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. Use explosion-proof - electrical, ventilating and/or lighting equipment.

**Personal Protective Equipment**

**Respiratory**

- In case of insufficient ventilation, wear suitable respiratory equipment.

**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**

ACGIH = American Conference of Governmental Industrial Hygiene

LLV = Limit Level Value is the exposure limit for 8-hour work day

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

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

STEV = Short Term Exposure Value

TWAEV = Time-Weighted Average Exposure Value

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

| | | | |
|---|---|---|---|
| **Material Description** | | | |
| Physical Form | Gas | Appearance/Description | Colorless gas with no odor. |
| Color | Colorless | Odor | Odorless |
| Odor Threshold | Data lacking | | |
| **General Properties** | | | |
| Boiling Point | Data lacking | Melting Point | Data lacking |
| Decomposition Temperature | Data lacking | pH | Data lacking |
| Specific Gravity/Relative Density | Data lacking | Water Solubility | Data lacking |
| Viscosity | Data lacking | Explosive Properties | Not explosive. |
| Oxidizing Properties: | Not an oxidizer. | | |
| **Volatility** | | | |
| Vapor Pressure | Data lacking | Vapor Density | Data lacking |
| Evaporation Rate | Data lacking | | |
| **Flammability** | | | |
| Flash Point | -187.7 C(-305.86 F) (Methane) | UEL | 15 % (Methane) |

| | | | |
|---|---|---|---|
| LEL | 5 %<br>(Methane) | Autoignition | 650 C(1202 F)<br>(Methane) |
| Flammability (solid, gas) | Flammable gas. | | |
| **Environmental** | | | |
| Octanol/Water Partition coefficient | Data lacking | | |

## 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, sparks, open flame.

## 10.5 Incompatible materials

- Methane is incompatible with strong oxidizers (i.e. chlorine, bromine pentafluoride, oxygen difluoride, and nitrogen trifluoride) Nitrogen reacts with Li, Nd, and Ti at high temperatures.

## 10.6 Hazardous decomposition products

- Methane will thermally decompose in air to generate carbon monoxide and carbon dioxide.

# Section 11 - Toxicological Information

## 11.1 Information on toxicological effects

| Components | | |
|---|---|---|
| Carbon dioxide (0.0005% TO 50%) | 124-38-9 | **Acute Toxicity:** Inhalation-Rat LC50 • 470000 ppm 30 Minute(s);<br>**Reproductive:** Inhalation-Rat TCLo • 6 pph 24 Hour(s)(10D preg); *Reproductive Effects:Specific Developmental Abnormalities*:**Musculoskeletal system**; *Reproductive Effects:Specific Developmental Abnormalities*:**Cardiovascular (circulatory) system**; *Reproductive Effects:Specific Developmental Abnormalities*:**Respiratory system** |

| GHS Properties | Classification |
|---|---|
| **Acute toxicity** | **EU/CLP** • Classification criteria not met<br>**OSHA HCS 2012** • Classification criteria not met |
| **Aspiration Hazard** | **EU/CLP** • Classification criteria not met<br>**OSHA HCS 2012** • Classification criteria not met |
| **Carcinogenicity** | **EU/CLP** • Classification criteria not met<br>**OSHA HCS 2012** • Classification criteria not met |
| **Germ Cell Mutagenicity** | **EU/CLP** • Classification criteria not met<br>**OSHA HCS 2012** • Classification criteria not met |

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

**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

- No PBT and vPvB assessment has been conducted.

### 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** | UN1954 | Compressed gases, flammable, n.o.s. (Methane, Nitrogen) | 2.1 | NDA | NDA |
| **TDG** | UN1954 | COMPRESSED GASES, FLAMMABLE, N.O.S. (Methane, Nitrogen) | 2.1 | NDA | Potential Marine Pollutant |
| **IMO/IMDG** | UN1954 | COMPRESSED GASES, FLAMMABLE, N.O.S. (Methane, Nitrogen) | 2.1 | NDA | NDA |
| **IATA/ICAO** | UN1954 | Compressed gases, flammable, n.o.s. (Methane, Nitrogen) | 2.1 | 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.

## Section 15 - Regulatory Information

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

**SARA Hazard Classifications**

- Acute, Fire, Pressure(Sudden Release of)

| State Right To Know | | | | |
|---|---|---|---|---|
| **Component** | **CAS** | **MA** | **NJ** | **PA** |
| Carbon dioxide | 124-38-9 | Yes | Yes | Yes |
| Methane | 74-82-8 | Yes | Yes | Yes |
| Nitrogen | 7727-37-9 | 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 |
| Methane | 74-82-8 | Yes | No | Yes | Yes | No |
| Nitrogen | 7727-37-9 | Yes | No | Yes | Yes | No |

| Inventory (Con't.) | | |
|---|---|---|
| **Component** | **CAS** | **TSCA** |
| Carbon dioxide | 124-38-9 | Yes |
| Methane | 74-82-8 | Yes |
| Nitrogen | 7727-37-9 | Yes |

## Canada

### Labor

**Canada - WHMIS - Classifications of Substances**

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | A; Uncontrolled product according to WHMIS classification criteria (solid) |
| • Nitrogen | 7727-37-9 | A |
| • Methane | 74-82-8 | A, B1 |

**Canada - WHMIS - Ingredient Disclosure List**

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | 1 % |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

### Environment

**Canada - CEPA - Priority Substances List**

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

## China

### Environment

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

### Other

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

**China - Dangerous Goods List**

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | (including solid or refrigerated liquid) |
| • Nitrogen | 7727-37-9 | (compressed or refrigerated liquid) |
| • Methane | 74-82-8 | (compressed or refrigerated liquid) |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

## Europe

### Other

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | F+; R12 |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | F+ R:12 S:(2)-9-16-33 |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | S:(2)-9-16-33 |

## Germany

### Environment

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

**Germany - Water Classification (VwVwS) - Annex 1**

| | | |
|---|---|---|
| • 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 |
| • Methane | 74-82-8 | ID Number 1343, not considered hazardous to water |

**Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes**

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

**Germany - Water Classification (VwVwS) - Annex 3**

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

**Other**

**Germany - Specifically Regulated Chemicals in TRGS**

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

## Portugal

**Other**

**Portugal - Prohibited Substances**

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

## United Kingdom

**Environment**

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

| | | |
|---|---|---|
| • 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 |
| • Methane | 74-82-8 | 10000 kg |

**Other**

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

## United States

### Labor

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

### Environment

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

## United States - California

**Environment**

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

## United States - Pennsylvania

**Labor**

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

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

| | | |
|---|---|---|
| • Carbon dioxide | 124-38-9 | Not Listed |
| • Nitrogen | 7727-37-9 | Not Listed |
| • Methane | 74-82-8 | Not Listed |

## 15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

# Section 16 - Other Information

**Last Revision Date** • 05/September/2014

**Preparation Date** • 05/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