

Safety Data Sheet



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

1.1 Product identifier

Product Name | Carbon Dioxide (0.1-1000 ppm), Carbon Tetrafluoride (0.1-1000 ppm), Hexafluoroethane (0.1-1000 ppm), Hydrogen (0.1-1000 ppm), Nitrogen (0.1-1000 ppm), Nitrous Oxide (0.1-1000 ppm), Containing Oxygen (0.1-1000 ppm), Sulfur Hexafluoride (0.1-1000 ppm); Helium (Balance)

Product Code | 60063

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

Relevant identified use(s) | Calibration Gas

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 - Classification criteria not met

2.2 Label Elements

CLP

WARNING



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

Precautionary statements

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

DSD/DPD

Risk phrases | No label element(s) required

2.3 Other Hazards

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

DSD/DPD | According to European Directive 1999/45/EC this preparation is not considered dangerous.

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
Reproductive Toxicity 2 - H361

2.2 Label elements

OSHA HCS 2012

WARNING



Hazard statements | Contains gas under pressure; may explode if heated - H280
Suspected of damaging fertility or the unborn child. - H361

Precautionary statements

Prevention | Obtain special instructions before use. - P201
Do not handle until all safety precautions have been read and understood. - P202
Wear protective gloves and eye/face protection , . - P280

Response | IF exposed or concerned: Get medical advice/attention. - P308+P313

Storage/Disposal | Store in a well-ventilated place. - P403
Store locked up. - P405
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

2.3 Other hazards

OSHA HCS 2012 | 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
Other Toxic Effects - D2A

2.2 Label elements

WHMIS



- Compressed Gas - A
- Other Toxic Effects - D2A

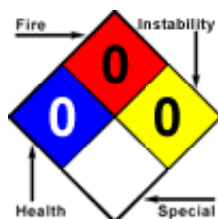
2.3 Other hazards

WHMIS

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

2.4 Other information

NFPA



- Note: This SDS has been developed for various gas mixtures with the composition of components within the ranges listed in Section 3(Composition/Information on Ingredients). All classifications provided are based on the highest end of the range provided for each component. Refer to the product label for information on the actual composition of the product.

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
Sulfur Hexafluoride	CAS:2551-62-4 EINECS:219-854-2	0.1ppm TO 1000ppm	NDA	EU DSD/DPD: Not Classified EU CLP: Self Classified - Press. Gas - Comp., H280 OSHA HCS 2012:
Oxygen	CAS:7782-44-7 EC Number:231-956-9 EU Index:008-001-00-8	0.1ppm TO 1000ppm	NDA	EU DSD/DPD: Annex I - O; R8 EU CLP: Annex VI - Ox. Gas 1, H270; Press. Gas - Comp., H280 OSHA HCS 2012: Ox. Gas 1; Press. Gas - Comp.
Nitrous Oxide	CAS:10024-97-2 EC Number:	0.1ppm TO 1000ppm	NDA	EU DSD/DPD: Self Classified - Muta. 3, R68; Repr. 3, R63; O, R8, R67; Xn, R48/20 EU CLP: Self Classified - Ox. Gas 1, H270; STOT SE 3: Narc., H336; Muta. 2, H341; Repr. 2 H361; STOT RE 2 (Nervous system, Bone Marrow), H373 OSHA HCS 2012: Ox. Gas 1; STOT SE 3: Narc.; Muta. 2; Repr. 2; STOT RE 2 (Nervous system, Bone Marrow)
Nitrogen	CAS:7727-37-9 EINECS:231-783-9	0.1ppm TO 1000ppm	NDA	EU DSD/DPD: Not Classified EU CLP: Self Classified - Press. Gas - Comp., H280 OSHA HCS 2012: Press. Gas- Comp.; Simp. Asphyx.

Hydrogen	CAS: 1333-74-0 EC Number: 215-605-7 EU Index: 001-001-00-9	0.1ppm TO 1000ppm	NDA	EU DSD/DPD: Annex I - F+; R12 EU CLP: Annex VI - Flam. Gas 1, H220; Press. Gas - Comp., H280 OSHA HCS 2012: Flam. Gas 1; Press. Gas - Comp.; Simp. Asphyx.
Hexafluoroethane	CAS: 76-16-4 EINECS: 200-939-8	0.1ppm TO 1000ppm	NDA	EU DSD/DPD: Not Classified EU CLP: Self Classified - Press. Gas - Comp., H280 OSHA HCS 2012: Press. Gas- Comp.; Simp. Asphyx.
Carbon tetrafluoride	CAS: 75-73-0 EINECS: 200-896-5	0.1ppm TO 1000ppm	NDA	EU DSD/DPD: Not Classified EU CLP: Self Classified - Press. Gas - Comp., H280 OSHA HCS 2012: Press. Gas - Comp.; Simp. Asphyx.
Carbon Dioxide	CAS: 124-38-9 EC Number: 204-696-9	0.1ppm TO 1000ppm	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.
Helium	CAS: 7440-59-7 EINECS: 231-168-5	Balance	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** | First aid is not expected to be necessary if material is used under ordinary conditions and as recommended.
- 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. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Emergency Procedures | 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. Wear appropriate personal protective equipment, avoid direct contact. 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
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
Sulfur Hexafluoride (2551-62-4)	STELs	Not established	Not established	Not established	9000 mg/m3 STEL	Not established
	TWAs	1000 ppm TWA	1000 ppm TWA	1000 ppm TWAEV; 5970 mg/m3 TWAEV	6000 mg/m3 TWA	Not established
Nitrous Oxide (10024-97-2)	TWAs	50 ppm TWA	25 ppm TWA; 45 mg/m3 TWA	50 ppm TWAEV; 90 mg/m3 TWAEV	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
Sulfur Hexafluoride (2551-62-4)	TWAs	1000 ppm TWA [VME]; 6000 mg/m3 TWA [VME]	Not established	1000 ppm TWA AGW (exposure factor 8); 6100 mg/m3 TWA AGW (exposure factor 8)	1000 ppm TWA; 6000 mg/m3 TWA	1000 ppm TWA
	STELs	Not established	Not established	Not established	1250 ppm STEL; 7500 mg/m3 STEL	Not established
	Ceilings	Not established	8000 ppm Peak; 48800 mg/m3 Peak	Not established	Not established	Not established
	MAKs	Not established	1000 ppm TWA MAK; 6100 mg/m3 TWA MAK	Not established	Not established	Not established

Nitrous Oxide (10024-97-2)	TWAs	Not established	Not established	100 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2); 180 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2)	50 ppm TWA; 90 mg/m3 TWA	50 ppm TWA
	Ceilings	Not established	200 ppm Peak; 360 mg/m3 Peak	Not established	Not established	Not established
	MAKs	Not established	100 ppm TWA MAK; 180 mg/m3 TWA MAK	Not established	Not established	Not established

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]
Sulfur Hexafluoride (2551-62-4)	TWAs	Not established	1000 ppm TWA; 6000 mg/m3 TWA	1000 ppm TWA; 6000 mg/m3 TWA	1000 ppm TWA; 6000 mg/m3 TWA	1000 ppm TWA [VLE-MP]
Nitrous Oxide (10024-97-2)	TWAs	Not established	25 ppm TWA (over the time exposed to waste anesthetic gas); 46 mg/m3 TWA (over the time exposed to waste anesthetic gas)	Not established	Not established	50 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
Sulfur Hexafluoride (2551-62-4)	TWAs	1000 ppm TWA [VLA-ED]; 6075 mg/m3 TWA [VLA-ED]	1000 ppm LLV; 6000 mg/m3 LLV
Nitrous Oxide (10024-97-2)	TWAs	50 ppm TWA [VLA-ED]; 92 mg/m3 TWA [VLA-ED]	100 ppm LLV; 180 mg/m3 LLV
	STELs	Not established	500 ppm STV; 900 mg/m3 STV

Exposure Control Notations

Portugal

- Helium (7440-59-7): **Simple Asphyxiants:** (Simple Asphyxiant)
- Hydrogen (1333-74-0): **Simple Asphyxiants:** (Simple Asphyxiant)
- Nitrogen (7727-37-9): **Simple Asphyxiants:** (Simple Asphyxiant)
- Nitrous Oxide (10024-97-2): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

Ireland

- Helium (7440-59-7): **Simple Asphyxiants:** (Asphyxiant)
- Hydrogen (1333-74-0): **Simple Asphyxiants:** (Asphyxiant)
- Nitrogen (7727-37-9): **Simple Asphyxiants:** (Asphyxiant)

Spain

- Helium (7440-59-7): **Simple Asphyxiants:** (simple asphyxiant)
- Hydrogen (1333-74-0): **Simple Asphyxiants:** (simple asphyxiant)
- Nitrogen (7727-37-9): **Simple Asphyxiants:** (simple asphyxiant)

Germany DFG

- Nitrous Oxide (10024-97-2): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)
- Sulfur Hexafluoride (2551-62-4): **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

ACGIH = American Conference of Governmental Industrial Hygiene	STEV = Short Term Exposure Value
LLV = Limit Level Value is the exposure limit for 8-hour work day	TWAEV = Time-Weighted Average Exposure Value
MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration	TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures
STEL = Short Term Exposure Limits are based on 15-minute 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	Not relevant		
General Properties			
Boiling Point	195.8 C(384.44 F) Helium	Melting Point	-272 C(-457.6 F) Helium
Decomposition Temperature	Data lacking	pH	Not relevant
Specific Gravity/Relative Density	0.967 Water=1 Helium	Density	1.153 kg/m³ Helium

Water Solubility	Slightly Soluble Helium	Viscosity	Data lacking
Explosive Properties	Not explosive.	Oxidizing Properties:	Not an oxidizing gas.
Volatility			
Vapor Pressure	Data lacking	Vapor Density	0.138 Air=1 Helium
Evaporation Rate	Data lacking		
Flammability			
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant	Autoignition	Not relevant
Flammability (solid, gas)	Not flammable.		
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.

10.5 Incompatible materials

- The trace components of this gas mixture have incompatibilities, but those incompatibilities are not expected to pose significant hazards due to the small percentage of these components in this gas mixture.

10.6 Hazardous decomposition products

- If this gas mixture is exposed to fire, it may decompose yielding toxic products (carbon oxides).

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Carbon Dioxide (0.1ppm TO 1000ppm)	124-38-9	Acute Toxicity: Inhalation-Rat LC50 • 470000 ppm 30 Minute(s); Reproductive: 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>
Nitrous Oxide (0.1ppm TO 1000ppm)	10024-97-2	Mutagen: DNA Inhibition • Inhalation-Human • 50 pph 24 Hour(s); Micronucleus test • Inhalation-Human • 1000 µg/L 18 Year(s)-Intermittent; Reproductive: Inhalation-Rat TCLo • 0.1 pph (1-19D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetal death; Reproductive Effects:Specific Developmental Abnormalities:Other developmental abnormalities</i>
Oxygen (0.1ppm	7782-	Reproductive: Inhalation-Rat TCLo • 10 pph 9 Hour(s)(22D preg); <i>Reproductive Effects:Specific Developmental</i>

TO 1000ppm) | 44-7 | Abnormalities:Respiratory system; Reproductive Effects:Effects on Newborn:Physical

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
Skin corrosion/Irritation	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Skin sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-RE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-SE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Toxicity for Reproduction	EU/CLP • Classification criteria not met OSHA HCS 2012 • Toxic to Reproduction 2
Respiratory sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Serious eye damage/Irritation	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met

Potential Health Effects

Inhalation

- Acute (Immediate) | No data available
- 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

Reproductive Effects

- Nitrous oxide has been shown to cause birth defects in rats. May be a teratogen in humans.

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 (Helium, Nitrous Oxide)	2.2	NDA	NDA
TDG	UN1956	COMPRESSED GAS, N.O.S. (Helium, Nitrous Oxide)	2.2	NDA	NDA
IMO/IMDG	UN1956	COMPRESSED GAS, N.O.S. (Helium, Nitrous Oxide)	2.2	NDA	NDA
IATA/ICAO	UN1956	Compressed gas, n.o.s (Helium, Nitrous Oxide)	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.

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, Chronic

State Right To Know				
Component	CAS	MA	NJ	PA
Carbon Dioxide	124-38-9	Yes	Yes	Yes
Carbon tetrafluoride	75-73-0	No	Yes	No
Hexafluoroethane	76-16-4	No	Yes	No
Helium	7440-59-7	Yes	Yes	Yes
Hydrogen	1333-74-0	Yes	Yes	Yes
Nitrogen	7727-37-9	Yes	Yes	Yes
Nitrous Oxide	10024-97-2	Yes	Yes	Yes
Oxygen	7782-44-7	Yes	Yes	Yes
Sulfur Hexafluoride	2551-62-4	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
Carbon tetrafluoride	75-73-0	Yes	No	Yes	Yes	No
Hexafluoroethane	76-16-4	Yes	No	Yes	Yes	No
Helium	7440-59-7	Yes	No	Yes	Yes	No
Hydrogen	1333-74-0	Yes	No	Yes	Yes	No
Nitrogen	7727-37-9	Yes	No	Yes	Yes	No
Nitrous Oxide	10024-97-2	Yes	No	Yes	Yes	No
Oxygen	7782-44-7	Yes	No	Yes	Yes	No
Sulfur Hexafluoride	2551-62-4	Yes	No	Yes	Yes	No

Inventory (Con't.)		
Component	CAS	TSCA
Carbon Dioxide	124-38-9	Yes
Carbon tetrafluoride	75-73-0	Yes
Hexafluoroethane	76-16-4	Yes
Helium	7440-59-7	Yes
Hydrogen	1333-74-0	Yes
Nitrogen	7727-37-9	Yes
Nitrous Oxide	10024-97-2	Yes
Oxygen	7782-44-7	Yes
Sulfur Hexafluoride	2551-62-4	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

• Nitrous Oxide	10024-97-2	A, C, D2A
• Carbon tetrafluoride	75-73-0	A
• Sulfur Hexafluoride	2551-62-4	A
• Hydrogen	1333-74-0	A, B1

• Oxygen	7782-44-7	A, C
• Carbon Dioxide	124-38-9	A; Uncontrolled product according to WHMIS classification criteria (solid)
• Nitrogen	7727-37-9	A
• Helium	7440-59-7	A
• Hexafluoroethane	76-16-4	A

Canada - WHMIS - Ingredient Disclosure List

• Nitrous Oxide	10024-97-2	0.1 %
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	1 %
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	1 %
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

Environment

Canada - CEPA - Priority Substances List

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

China

Environment

China - Ozone Depleting Substances - First Schedule

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

China - Ozone Depleting Substances - Second Schedule

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed

• Hexafluoroethane	76-16-4	Not Listed
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China - Ozone Depleting Substances - Third Schedule

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

Other

China - Annex I & II - Controlled Chemicals Lists

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

China - Dangerous Goods List

• Nitrous Oxide	10024-97-2	(including refrigerated liquid)
• Carbon tetrafluoride	75-73-0	
• Sulfur Hexafluoride	2551-62-4	
• Hydrogen	1333-74-0	(compressed or refrigerated liquid)
• Oxygen	7782-44-7	(compressed or refrigerated liquid)
• Carbon Dioxide	124-38-9	(including solid or refrigerated liquid)
• Nitrogen	7727-37-9	(compressed or refrigerated liquid)
• Helium	7440-59-7	(compressed or refrigerated liquid)
• Hexafluoroethane	76-16-4	

China - Export Control List - Part I Chemicals

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

Europe

Other

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	F+; R12
• Oxygen	7782-44-7	O; R8
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	F+ R:12 S:(2)-9-16-33
• Oxygen	7782-44-7	O R:8 S:(2)-17
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	S:(2)-9-16-33
• Oxygen	7782-44-7	S:(2)-17
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed

• Hexafluoroethane	76-16-4	Not Listed
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Germany

Environment

Germany - TA Luft - Types and Classes

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

Germany - Water Classification (VwVwS) - Annex 1

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	ID Number 846, not considered hazardous to water
• Hydrogen	1333-74-0	ID Number 741, not considered hazardous to water
• Oxygen	7782-44-7	ID Number 743, not considered hazardous to water
• 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
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	ID Number 767, hazard class 1 - low hazard to waters
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

Germany - Water Classification (VwVwS) - Annex 3

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

Other

Germany - Specifically Regulated Chemicals in TRGS

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

Portugal

Other

Portugal - Prohibited Substances

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

United Kingdom

Environment

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

• Nitrous Oxide	10024-97-2	10000 kg
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	10 kg
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	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
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

Other

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed

• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

United Kingdom - List of Dangerous Substances in Water

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

United States

Labor

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

Environment

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed

• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
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• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

United States - California

Environment

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	developmental toxicity, initial date 8/1/08
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed

• Hexafluoroethane	76-16-4	Not Listed
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U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

United States - Pennsylvania

Labor

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Carbon tetrafluoride	75-73-0	Not Listed
• Sulfur Hexafluoride	2551-62-4	Not Listed
• Hydrogen	1333-74-0	Not Listed
• Oxygen	7782-44-7	Not Listed
• Carbon Dioxide	124-38-9	Not Listed
• Nitrogen	7727-37-9	Not Listed
• Helium	7440-59-7	Not Listed
• Hexafluoroethane	76-16-4	Not Listed

15.2 Chemical Safety Assessment

1 No Chemical Safety Assessment has been carried out.

15.3 Other Information

- | WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Section 16 - Other Information

Relevant Phrases (code & full text)

- | H220 - Extremely flammable gas
- | H270 - May cause or intensify fire; oxidizer
- | H336 - May cause drowsiness or dizziness
- | H341 - Suspected of causing genetic defects.
- | H361 - Suspected of damaging fertility or the unborn child.
- | H373 - May cause damage to organs through prolonged or repeated exposure.
- | R8 - Contact with combustible material may cause fire.
- | R12 - Extremely flammable.
- | R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- | R63 - Possible risk of harm to the unborn child.
- | R67 - Vapours may cause drowsiness and dizziness.
- | R68 - Possible risk of irreversible effects.

Last Revision Date

- | 22/December/2014

Preparation Date

- | 25/July/2012

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