

## Safety Data Sheet



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

#### 1.1 Product identifier

**Product Name** | Tetrafluoromethane (1-50%), Carbon Dioxide (Balance)  
**Product Code** | 60093

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

**Relevant identified use(s)** | Semiconductor Uses

#### 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  
Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336  
**DSD/DPD** | R67

#### 2.2 Label Elements

**CLP**

#### WARNING



**Hazard statements** | H280 - Contains gas under pressure; may explode if heated  
H336 - May cause drowsiness or dizziness

#### Precautionary statements

**Prevention** | P261 - Avoid breathing gas.  
P271 - Use only outdoors or in a well-ventilated area.

**Response** | P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.

**Storage/Disposal** | P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P405 - Store locked up.  
P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**DSD/DPD**

**Risk phrases** | R67 - Vapours may cause drowsiness and dizziness.

**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.  
Contact with gas or liquefied gas will cause burns, severe injury and/or frostbite.  
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.  
Contact with gas or liquefied gas will cause burns, severe injury and/or frostbite.  
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  
Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336  
Simple Asphyxiant

**2.2 Label elements**

**OSHA HCS 2012**

**WARNING**



**Hazard statements** | Contains gas under pressure; may explode if heated - H280  
May cause drowsiness or dizziness - H336  
May displace oxygen and cause rapid suffocation.

**Precautionary statements**

**Prevention** | Avoid breathing gas. - P261  
Use only outdoors or in a well-ventilated area. - P271

**Response** | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. - P304+P340  
Call a POISON CENTER or doctor/physician if you feel unwell. - P312

**Storage/Disposal** | Store in a well-ventilated place. Keep container tightly closed. - P403+P233  
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** | Inhalation of carbon dioxide can increase respiration and heart rate. Contact with gas or liquefied gas will cause burns, severe injury and/or frostbite. 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

#### 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.  
Contact with gas or liquefied gas will cause burns, severe injury and/or frostbite.  
In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

#### 2.4 Other information

NFPA



## 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	%	Classifications According to Regulation/Directive
Tetrafluoromethane	CAS:75-73-0 EINECS:200-896-5	1% TO 50%	EU DSD/DPD: Self Classified - R67 EU CLP: Self Classified - Press Gas - Comp; H280; STOT SE 3: Narc., H336 OSHA HCS 2012: Press Gas. - Comp.; STOT SE 3: Narc.; Simp. Asphyx.
Carbon dioxide	CAS:124-38-9 EC Number:204-696-9	Balance	EU DSD/DPD: Not Classified EU CLP: Self Classified - Press. Gas - Comp., H280 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** | If frostbite has occurred, seek medical attention immediately; do NOT rub the affected area(s) or flush them with water. In order to prevent further tissue damage, do NOT attempt to remove frozen clothing from frostbitten areas. If frostbite has not occurred, immediately and thoroughly wash contaminated skin with soap and water.
- Eye** | If eye tissue is frozen, seek medical attention immediately; if tissue is not frozen, immediately and thoroughly flush the eyes with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation, pain, swelling, lacrimation or photophobia persist, get medical attention as soon as possible.
- Ingestion** | If frostbite has occurred, seek medical attention immediately; do NOT rub the affected area(s) or flush them with water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting.

### 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** | Use extinguishing agent suitable for type of surrounding fire.  
SMALL FIRES: Dry chemical or CO<sub>2</sub>.  
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** | 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.  
Always wear thermal protective clothing when handling refrigerated/cryogenic liquids. 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 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

- | No special environmental precautions necessary.

### 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.  
Allow substance to evaporate.  
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.  
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** | Use only with adequate ventilation. Ventilate closed spaces before entering. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing gas. 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.

### 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
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
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]
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			

## 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

- 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

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

NIOSH = National Institute of Occupational Safety and Health

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

STEV = Short Term Exposure Value

TWAEV = Time-Weighted Average Exposure Value

ACGIH = American Conference of Governmental Industrial Hygiene

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

Material Description			
Physical Form	Gas	Appearance/Description	Nonflammable compressed colorless odorless gas.
Color	Colorless	Odor	Odorless
Odor Threshold	Data lacking		
General Properties			
Boiling Point	56 C(132.8 F) Carbon dioxide	Melting Point	56 C(132.8 F) Carbon dioxide
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Water Solubility	Slightly Soluble Carbon dioxide
Viscosity	Data lacking	Explosive Properties	Not relevant.
Oxidizing Properties:	Not an oxidizer.		
Volatility			
Vapor Pressure	5728.9 kPa @ 20 C(68 F) Carbon dioxide	Vapor Density	Data lacking
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 Carbon Dioxide component may cause this mixture to be incompatible with acrolein or aziridine, magnesium, titanium, zirconium or magnesium-aluminum alloy dusts, lithium or sodium, metal hydrides (e.g. aluminum hydride) or aluminum, chromium or manganese dusts sodium peroxide and aluminum or magnesium or tin powders, diethyl magnesium, cesium oxide, monolithium acetylide-ammonia or rubidium acetylide, powdered metals and nitrogen (e.g. beryllium, cerium and alloys, thorium, uranium, titanium and zirconium) - ignite on heating in mixtures of carbon dioxide and nitrogen. Due to the presence of Carbon Tetrafluoride, the following materials are not compatible with this gas mixture: carbon dioxide above 1000°C; alloys of more than 2% magnesium in the presence of water. Silver and copper-bearing alloys can act as catalysts for the decomposition of this product at high temperatures.

## 10.6 Hazardous decomposition products

- Combustion: If involved in a fire, this gas mixture can product carbonyl fluoride, hydrogen fluoride and phosgene. Hydrolysis: Contact with water may result in formation of carbonic acid when the Carbon Dioxide level is high.

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

Components		
Carbon dioxide (50% TO 99%)	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</i> ; <i>Reproductive Effects:Specific Developmental Abnormalities:Cardiovascular (circulatory) system</i> ; <i>Reproductive Effects:Specific Developmental Abnormalities:Respiratory system</i>

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 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
Toxicity for Reproduction	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
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)

- | 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)

- | Contact with gas or liquefied gas will cause burns, severe injury and/or frostbite.

#### Chronic (Delayed)

- | No data available

### Eye

#### Acute (Immediate)

- | Contact with gas or liquefied gas will cause burns, severe injury and/or frostbite.

#### Chronic (Delayed)

- | No data available

### Ingestion

#### Acute (Immediate)

- | Ingestion can cause burns similar to frostbite.

#### Chronic (Delayed)

- | No data available

## 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 (Carbon dioxide, Tetrafluoromethane)	2.2	NDA	NDA
TDG	UN1956	COMPRESSED GAS, N.O.S. (Carbon Dioxide, Tetrafluoromethane)	2.2	NDA	NDA
IMO/IMDG	UN1956	COMPRESSED GAS, N.O.S. (Carbon Dioxide, Tetrafluoromethane)	2.2	NDA	NDA
IATA/ICAO	UN1956	Compressed gas, n.o.s. (Carbon Dioxide, Tetrafluoromethane)	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 | Acute, Pressure(Sudden Release of)

State Right To Know				
Component	CAS	MA	NJ	PA
Carbon dioxide	124-38-9	Yes	Yes	Yes
Tetrafluoromethane	75-73-0	No	Yes	No

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Carbon dioxide	124-38-9	Yes	No	Yes	Yes	No
Tetrafluoromethane	75-73-0	Yes	No	Yes	Yes	No

Inventory (Con't.)		
Component	CAS	TSCA
Carbon dioxide	124-38-9	Yes
Tetrafluoromethane	75-73-0	Yes

## Canada

### Labor

#### Canada - WHMIS - Classifications of Substances

- |                      |          |                                            |
|----------------------|----------|--------------------------------------------|
| • Tetrafluoromethane | 75-73-0  | A                                          |
| • Carbon dioxide     | 124-38-9 | A; Uncontrolled product according to WHMIS |

classification criteria (solid)

**Canada - WHMIS - Ingredient Disclosure List**

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	1 %

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

**China - Dangerous Goods List**

• Tetrafluoromethane	75-73-0	
• Carbon dioxide	124-38-9	(including solid or refrigerated liquid)

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

**Germany**

**Environment**

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	ID Number 256, not considered hazardous to water

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

**Other**

**Germany - Specifically Regulated Chemicals in TRGS**

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

**Portugal**

**Other**

**Portugal - Prohibited Substances**

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

**United Kingdom**

**Environment**

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

• Tetrafluoromethane	75-73-0	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

**Other**

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

**United States - California****Environment****U.S. - California - Proposition 65 - Carcinogens List**

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

**United States - Pennsylvania**

**Labor**

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

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

• Tetrafluoromethane	75-73-0	Not Listed
• Carbon dioxide	124-38-9	Not Listed

**15.2 Chemical Safety Assessment**

| No Chemical Safety Assessment has been carried out.

**Section 16 - Other Information**

**Last Revision Date** | 08/December/2014

**Preparation Date** | 08/December/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