Safety Data Sheet



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

1.1 Product identifier

Product Name

Propane (0.5 - 1%), Oxygen (0.0001 - 19.49%), Nitrogen (Balance)

Product Code

M-O300110/E-1

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

Relevant identified use(s)

• Please provide product use

1.3 Details of the supplier of the safety data sheet

Manufacturer

Air Liquide

2700 Post Oak Blvd. Houston, TX 77056 United States

www.us.airliquide.com sds@airliquide.com

Telephone (Technical) • 713-896-2896 Telephone (Technical) • 800-819-1704

1.4 Emergency telephone number

Manufacturer

• 800-424-9300 - CHEMTREC

Manufacturer

+1 703-527-3887 - Outside United States

Section 2: Hazards Identification

EU/EEC

According to Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010] According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP

Compressed Gas - H280

DSD/DPD

Not classified

2.2 Label Elements

CLP

WARNING



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

Precautionary statements

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

Preparation Date: 25/July/2012 Revision Date: 05/September/2014 DSD/DPD

Risk phrases . No label element(s) required

2.3 Other Hazards

CLP

 This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces.
 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.
 This preparation is not considered dangerous according to European Directive 1999/45/EC.

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012

 Compressed Gas - H280 Simple Asphyxiant

2.2 Label elements OSHA HCS 2012

WARNING



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

Precautionary statements

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

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

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.
 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		
Oxygen	CAS:7782-44-7 EC Number:231-956-9 EU Index:008-001-00-8	0.0001% TO 19.49%	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.		
Propane CAS:74-98-6 EC Number:200-827-9 EU Index:601-003-00-5		0.5% TO 1%	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.		
Nitrogen	CAS:7727-37-9 EINECS:231-783-9	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

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

Eve

• 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.

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

 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

 Stop leak if you can do it without risk. 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.
 Do not direct water at spill or source of leak.
 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. Isolate area until gas has dispersed.

Ventilate the area.

6.4 Reference to other sections

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

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

• Use only with adequate ventilation. Ventilate closed spaces before entering. Be aware of any signs of dizziness or fatigue, especially if work is done in a poorly ventilated area; exposures to fatal concentrations of this gas mixture could occur without any significant warning symptoms, due to olfactory fatigue or oxygen deficiency. Wear appropriate personal protective equipment, avoid direct contact. 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	Germany DFG	Germany TRGS
Propane (74-98-6)	TWAs	1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4)	1000 ppm TWA	1000 ppm TWAEV; 1800 mg/m3 TWAEV	Not established	1000 ppm TWA AGW (exposure factor 4); 1800 mg/m3 TWA AGW (exposure factor 4)
	Ceilings	Not established	Not established	Not established	4000 ppm Peak; 7200 mg/m3 Peak	Not established
	MAKs	Not established	Not established	Not established	1000 ppm TWA MAK; 1800 mg/m3 TWA MAK	Not established
		Ex	posure Limits/Gu	idelines (Con't.)		
	Result	Ireland	Israel	NIOSH	OSHA	OSHA Vacated
Propane (74-98-6)	TWAs	1000 ppm TWA	1000 ppm TWA (gas)	1000 ppm TWA; 1800 mg/m3 TWA	1000 ppm TWA; 1800 mg/m3 TWA	1000 ppm TWA; 1800 mg/m3 TWA
		Ex	posure Limits/Gu	idelines (Con't.)		
		Result	Portugal		Spain	
Propane (74-98-6)		TWAs	1000 ppm TWA [VL MP]	E-	1000 ppm TWA [VLA ED]	\- -

Exposure Control Notations

Portugal

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

Ireland

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

•Propane (74-98-6): Simple Asphyxiants: (Asphyxiant)

Spain

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

Germany DFG

•Propane (74-98-6): **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

STEL = Short Term Exposure Limits are based on 15-minute exposures

NIOSH = National Institute of Occupational Safety and Health

TWAEV = Time-Weighted Average Exposure Value

OSHA = Occupational Safety and Health Administration

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	рН	Not relevant
Specific Gravity/Relative Density	Data lacking	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Not explosive.
Oxidizing Properties:	Not an oxidizing gas.		
Volatility	•		-
Vapor Pressure	Data lacking	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			

-		
Ostonal/Mater Doutition coefficient	Data looking	
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

Nitrogen reacts with Li, Nd, and Ti at high temperatures.

10.6 Hazardous decomposition products

None known.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

	Components
Oxygen (0.0001% TO 19.49%)	Reproductive: Inhalation-Rat TCLo • 10 pph 9 Hour(s)(22D preg); Reproductive Effects:Specific Developmental 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 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)

• 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)

Skin

Acute (Immediate)

Chronic (Delayed)

Eve

Acute (Immediate)

Chronic (Delayed)

Ingestion

Acute (Immediate)

Chronic (Delayed)

Key to abbreviations

TC = Toxic Concentration

No data available

- Under normal conditions of use, no health effects are expected.
- Under normal conditions of use, no health effects are expected.
- Under normal conditions of use, no health effects are expected.
- Under normal conditions of use, no health effects are expected.
- Ingestion is not anticipated to be a likely route of exposure to this product.
- Ingestion is not anticipated to be a likely route of exposure to this product.

Section 12 - Ecological Information

12.1 Toxicity

Material data lacking.

12.2 Persistence and degradability

Material data lacking.

12.3 Bioaccumulative potential

Material data lacking.

12.4 Mobility in Soil

Material data lacking.

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

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

Packaging waste

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

Section 14 - Transport Information

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

State Right To Know				
Component	CAS	MA	NJ	PA
Nitrogen	7727-37-9	Yes	Yes	Yes
Oxygen	7782-44-7	Yes	Yes	Yes
Propane	74-98-6	Yes	Yes	Yes

			Inventory			
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Nitrogen	7727-37-9	Yes	No	Yes	Yes	No

Oxygen	7782-44-7	Yes	No	Yes	Yes	No
Propane	74-98-6	Yes	No	Yes	Yes	No
			Inventory (Co	n't.)		
Componen	t		CAS	TSC	CA	
Nitrogen		772	7-37-9	Υe	es .	
Oxygen		778	32-44-7	Υe	s	
Propane		74-	98-6	Υe	es	

Canada

Canada - WHMIS - Classifications of Substances	7700 44 7	A 0
Oxygen	7782-44-7	A, C
Propane	74-98-6	A, B1
Nitrogen	7727-37-9	A
Canada - WHMIS - Ingredient Disclosure List		
Oxygen	7782-44-7	Not Listed
• Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed

Environment		
Canada - CEPA - Priority Substances List		
Oxygen	7782-44-7	Not Listed
• Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed

China

Oxygen	7782-44-7 Not Listed	
• Propane	74-98-6	Not Listed
• Nitrogen	7727-37-9	Not Listed
China - Ozone Depleting Substances - Second Schedule		
• Oxygen	7782-44-7	Not Listed
• Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed
China - Ozone Depleting Substances - Third Schedule		
• Oxygen	7782-44-7	Not Listed
• Propane	74-98-6	Not Listed
• Nitrogen	7727-37-9	Not Listed

Other China - Annex I & II - Controlled Chemicals Lists			
Oxygen	7782-44-7	Not Listed	
Propane	74-98-6	Not Listed	
Nitrogen	7727-37-9	Not Listed	
China - Dangerous Goods List			

• Oxygen	7782-44-7	(compressed or refrigerated liquid)
• Propane	74-98-6	
Nitrogen	7727-37-9	(compressed or refrigerated liquid)
China - Export Control List - Part I Chemicals		
Oxygen	7782-44-7	Not Listed
Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed

Europe

her		
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification		
Oxygen	7782-44-7	O; R8
Propane	74-98-6	F+; R12
• Nitrogen	7727-37-9	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration	n Limits	
Oxygen	7782-44-7	Not Listed
Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling		
Oxygen	7782-44-7	O R:8 S:(2)-17
Propane	74-98-6	F+ R:12 S:(2)-9-16
Nitrogen	7727-37-9	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Subst	ances and Preparations	
Oxygen	7782-44-7	Not Listed
Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrase	s	
Oxygen	7782-44-7	S:(2)-17
Propane	74-98-6	S:(2)-9-16
• Nitrogen	7727-37-9	Not Listed

Germany

Environment Germany - TA Luft - Types and Classes		
Oxygen	7782-44-7	Not Listed
Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed
Germany - Water Classification (VwVwS) - Annex 1		
• Oxygen	7782-44-7	ID Number 743, not considered hazardous to water
Propane	74-98-6	ID Number 560, not considered hazardous to water
• Nitrogen	7727-37-9	ID Number 1351, not considered hazardous to water

Germany - Water Classification (VwVwS) - Annex 2 - Wate Oxygen	er Hazard Classes 7782-44-7	Not Listed
• Propane	74-98-6	Not Listed
• Nitrogen	7727-37-9	Not Listed
Germany - Water Classification (VwVwS) - Annex 3		
• Oxygen	7782-44-7	Not Listed
• Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed
Other		
Germany - Specifically Regulated Chemicals in TRGS		
Oxygen	7782-44-7	Not Listed
• Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed
ortugal		
Other —		
Portugal - Prohibited Substances		
Oxygen	7782-44-7	Not Listed
Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed
nited Kingdom Environment		
United Kingdom - Pollution Inventory - Schedule 1 - Thres • Oxygen	7782-44-7	Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres		Not Listed Not Listed Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres Oxygen Propane Nitrogen	7782-44-7 74-98-6 7727-37-9	Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres Oxygen Propane Nitrogen Other United Kingdom - Workplace Exposure Limits (WELs) - Su Oxygen Propane	7782-44-7 74-98-6 7727-37-9 Substances in Review 7782-44-7 74-98-6 7727-37-9	Not Listed Not Listed Not Listed Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres Oxygen Propane Nitrogen Other United Kingdom - Workplace Exposure Limits (WELs) - Su Oxygen Propane Nitrogen	7782-44-7 74-98-6 7727-37-9 Substances in Review 7782-44-7 74-98-6 7727-37-9	Not Listed Not Listed Not Listed Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres Oxygen Propane Nitrogen Other United Kingdom - Workplace Exposure Limits (WELs) - Su Oxygen Propane Nitrogen United Kingdom - List of Dangerous Substances in Water	7782-44-7 74-98-6 7727-37-9 Substances in Review 7782-44-7 74-98-6 7727-37-9	Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres Oxygen Propane Nitrogen Other United Kingdom - Workplace Exposure Limits (WELs) - Steen Oxygen Propane Propane Nitrogen United Kingdom - List of Dangerous Substances in Water Oxygen	7782-44-7 74-98-6 7727-37-9 Substances in Review 7782-44-7 74-98-6 7727-37-9	Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres Oxygen Propane Nitrogen Other United Kingdom - Workplace Exposure Limits (WELs) - Su Oxygen Propane Nitrogen United Kingdom - List of Dangerous Substances in Water Oxygen Propane Propane Nitrogen	7782-44-7 74-98-6 7727-37-9 Substances in Review 7782-44-7 74-98-6 7727-37-9 7782-44-7 74-98-6	Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres Oxygen Propane Nitrogen Other United Kingdom - Workplace Exposure Limits (WELs) - Su Oxygen Propane Nitrogen United Kingdom - List of Dangerous Substances in Water Oxygen Propane Nitrogen Propane Nitrogen	7782-44-7 74-98-6 7727-37-9 Abstances in Review 7782-44-7 74-98-6 7727-37-9 7782-44-7 74-98-6 7727-37-9	Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres Oxygen Propane Nitrogen Other United Kingdom - Workplace Exposure Limits (WELs) - Steen Oxygen Propane Nitrogen United Kingdom - List of Dangerous Substances in Water Oxygen Propane Propane Nitrogen Inited States Labor U.S OSHA - Process Safety Management - Highly Hazard	7782-44-7 74-98-6 7727-37-9 Abstances in Review 7782-44-7 74-98-6 7727-37-9 7782-44-7 74-98-6 7727-37-9	Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres Oxygen Propane Nitrogen Other United Kingdom - Workplace Exposure Limits (WELs) - Su Oxygen Propane Nitrogen United Kingdom - List of Dangerous Substances in Water Oxygen Propane Nitrogen Propane Nitrogen Inited States abor U.S OSHA - Process Safety Management - Highly Hazard Oxygen	7782-44-7 74-98-6 7727-37-9 Substances in Review 7782-44-7 74-98-6 7727-37-9 7782-44-7 74-98-6 7727-37-9 dous Chemicals	Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres Oxygen Propane Nitrogen Other United Kingdom - Workplace Exposure Limits (WELs) - Su Oxygen Propane Nitrogen United Kingdom - List of Dangerous Substances in Water Oxygen Propane Nitrogen Nitrogen nited States abor U.S OSHA - Process Safety Management - Highly Hazard Oxygen Propane	7782-44-7 74-98-6 7727-37-9 Jubstances in Review 7782-44-7 74-98-6 7727-37-9 7782-44-7 74-98-6 7727-37-9 dous Chemicals 7782-44-7 74-98-6	Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres Oxygen Propane Nitrogen Other United Kingdom - Workplace Exposure Limits (WELs) - Su Oxygen Propane Nitrogen United Kingdom - List of Dangerous Substances in Water Oxygen Propane Nitrogen Nitrogen Nitrogen U.S OSHA - Process Safety Management - Highly Hazard Oxygen Oxygen	7782-44-7 74-98-6 7727-37-9 Substances in Review 7782-44-7 74-98-6 7727-37-9 7782-44-7 74-98-6 7727-37-9 dous Chemicals	Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres Oxygen Propane Nitrogen Other United Kingdom - Workplace Exposure Limits (WELs) - Su Oxygen Propane Nitrogen United Kingdom - List of Dangerous Substances in Water Oxygen Propane Nitrogen Nitrogen nited States abor U.S OSHA - Process Safety Management - Highly Hazard Oxygen Propane Nitrogen U.S OSHA - Specifically Regulated Chemicals	7782-44-7 74-98-6 7727-37-9 Abstances in Review 7782-44-7 74-98-6 7727-37-9 7782-44-7 74-98-6 7727-37-9 dous Chemicals 7782-44-7 74-98-6 7727-37-9	Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres Oxygen Propane Nitrogen Other United Kingdom - Workplace Exposure Limits (WELs) - St Oxygen Propane Nitrogen United Kingdom - List of Dangerous Substances in Water Oxygen Propane Nitrogen Nitrogen nited States abor U.S OSHA - Process Safety Management - Highly Hazard Oxygen Propane Nitrogen U.S OSHA - Specifically Regulated Chemicals Oxygen Oxygen	7782-44-7 74-98-6 7727-37-9 Abstances in Review 7782-44-7 74-98-6 7727-37-9 7782-44-7 74-98-6 7727-37-9 dous Chemicals 7782-44-7 74-98-6 7727-37-9	Not Listed Not Listed
United Kingdom - Pollution Inventory - Schedule 1 - Thres Oxygen Propane Nitrogen Other United Kingdom - Workplace Exposure Limits (WELs) - Su Oxygen Propane Nitrogen United Kingdom - List of Dangerous Substances in Water Oxygen Propane Nitrogen Propane Nitrogen nited States Labor U.S OSHA - Process Safety Management - Highly Hazard Oxygen Propane Nitrogen Nitrogen U.S OSHA - Specifically Regulated Chemicals	7782-44-7 74-98-6 7727-37-9 Abstances in Review 7782-44-7 74-98-6 7727-37-9 7782-44-7 74-98-6 7727-37-9 dous Chemicals 7782-44-7 74-98-6 7727-37-9	Not Listed

nvironment U.S CAA (Clean Air Act) - 1990 Hazardous Air Pollutants		
Oxygen	7782-44-7	Not Listed
• Propane	74-98-6	Not Listed
• Nitrogen	7727-37-9	Not Listed
U.S CERCLA/SARA - Hazardous Substances and their Re	eportable Quantities	
Oxygen	7782-44-7	Not Listed
• Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed
U.S CERCLA/SARA - Radionuclides and Their Reportable	Quantities	
Oxygen	7782-44-7	Not Listed
Propane	74-98-6	Not Listed
• Nitrogen	7727-37-9	Not Listed
U.S CERCLA/SARA - Section 302 Extremely Hazardous Su	ubstances EPCRA RQs	
Oxygen	7782-44-7	Not Listed
Propane	74-98-6	Not Listed
• Nitrogen	7727-37-9	Not Listed
U.S CERCLA/SARA - Section 302 Extremely Hazardous S	ubstances TPQs	
Oxygen	7782-44-7	Not Listed
• Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed
U.S CERCLA/SARA - Section 313 - Emission Reporting		
Oxygen	7782-44-7	Not Listed
Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed
U.S CERCLA/SARA - Section 313 - PBT Chemical Listing		
• Oxygen	7782-44-7	Not Listed
• Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed

United States - California

/ironment I.S California - Proposition 65 - Carcinogens Li	st
• Oxygen	7782-44-7 Not Listed
Propane	74-98-6 Not Listed
Nitrogen	7727-37-9 Not Listed
J.S California - Proposition 65 - Developmental	Toxicity
• Oxygen	7782-44-7 Not Listed
Propane	74-98-6 Not Listed
Nitrogen	7727-37-9 Not Listed
J.S California - Proposition 65 - Maximum Allov	vable Dose Levels (MADL)
• Oxygen	7782-44-7 Not Listed
Propane	74-98-6 Not Listed
Nitrogen	7727-37-9 Not Listed

U.S California - Proposition 65 - No Significan	t Risk Levels (NSRL)	
Oxygen	7782-44-7 Not Listed	
Propane	74-98-6 Not Listed	
• Nitrogen	7727-37-9 Not Listed	
U.S California - Proposition 65 - Reproductive	Toxicity - Female	
Oxygen	7782-44-7 Not Listed	
Propane	74-98-6 Not Listed	
Nitrogen	7727-37-9 Not Listed	
U.S California - Proposition 65 - Reproductive	e Toxicity - Male	
Oxygen	7782-44-7 Not Listed	
Propane	74-98-6 Not Listed	
Nitrogen	7727-37-9 Not Listed	

United States - Pennsylvania

5 Pennsylvania - RTK (Right to Know) - Er	nvironmental Hazard List	
Oxygen	7782-44-7	Not Listed
Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed
.S Pennsylvania - RTK (Right to Know) - Sp	pecial Hazardous Substances	
Oxygen	7782-44-7	Not Listed
Propane	74-98-6	Not Listed
Nitrogen	7727-37-9	Not Listed

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Last Revision Date Preparation Date

Disclaimer/Statement of Liability

05/September/2014

25/July/2012

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