Safety Data Sheet

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

1.1 Product identifier

Product Name • **Oxygen (19.5-50%) in Nitrous Oxide (Balance)**

Product Code • M-4558/E-1

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 • Oxidizing Gases 1 - H270
Compressed Gas - H280
Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336

DSD/DPD • Oxidizing (O)

R8

2.2 Label Elements

CLP

DANGER

Hazard statements • H270 - May cause or intensify fire; oxidizer
H280 - Contains gas under pressure; may explode if heated

H336 - May cause drowsiness or dizziness

Precautionary statements

Prevention
- P220 - Keep/Store away from clothing and other combustible materials.
P244 - Keep reduction valves free from grease and oil.
P261 - Avoid breathing gas.
P271 - Use only outdoors or in a well-ventilated area.

Response
- P370+P376 - In case of fire: Stop leak if safe to do so.
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
- R8 - Contact with combustible material may cause fire.

Safety phrases
- S37 - Wear suitable gloves.

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 considered dangerous.

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012
- Oxidizing Gases 1 - H270
Compressed Gas - H280
Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336

2.2 Label elements

OSHA HCS 2012

DANGER

Hazard statements
- May cause or intensify fire; oxidizer - H270
Contains gas under pressure; may explode if heated - H280
May cause drowsiness or dizziness - H336

Precautionary statements

Prevention
- Keep/Store away from clothing and other combustible materials. - P220
Keep reduction valves free from grease and oil. - P244
Avoid breathing gas. - P261
Use only outdoors or in a well-ventilated area. - P271

Response
- In case of fire: Stop leak if safe to do so. - P370+P376
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

- 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
  Oxidizing - C

2.2 Label elements

WHMIS

- Compressed Gas - A
  Oxidizing - C

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

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	19.5% TO 50%	**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 **EINECS:**233-032-0	Balance	**EU DSD/DPD:** Self Classified: O; R8; Muta. 3, R68; Repr. 3, R63; R67; Xn; R48/20 **EU CLP:** Self Classified: Press. Gas - Comp., H280; Ox. Gas 1, H270; Muta. 2, H341; Repr. 2 H361; STOT SE 3: Narc., H336; STOT RE 2 (Nervous System, Bone Marrow), H373 **OSHA HCS 2012:** Press. Gas - Comp.; Ox. Gas 1; Muta. 2; Repr. 2; STOT SE 3: Narc.; STOT RE 2 (Nervous System, Bone Marrow)

See Section 11 for Toxicological Information. See Section 16 for full text of H-statements and R-phrases.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

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

Eye
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Get medical attention immediately if symptoms occur.

Ingestion
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. 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 CO2.
  LARGE FIRES: Water spray or fog.

Unsuitable Extinguishing Media
- No data available

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards
- 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

- No data available

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.
Allow substance to evaporate.

6.4 Reference to other sections

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

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use only with adequate ventilation. Ventilate closed spaces before entering. Be aware of any signs of dizziness or fatigue, especially if work is done in a poorly ventilated area; exposures to fatal concentrations of this gas mixture could occur without any significant warning symptoms, due to olfactory fatigue or oxygen deficiency. Cylinders should be firmly secured to prevent falling or being knocked-over. Do not attempt to repair, adjust, or in any other way modify cylinders. If there is a malfunction or another type of operational problem, contact nearest distributor immediately. Empty containers retain product residue and can be hazardous. Do not cut, weld, puncture or incinerate container.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Store in a cool, dry, well-ventilated place. Protect cylinders against physical damage.

Cylinders should be firmly secured to prevent falling or being knocked-over.

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**
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	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)
	Ceilings	Not established	Not established	Not established	200 ppm Peak; 360 mg/m3 Peak	Not established
	MAKs	Not established	Not established	Not established	100 ppm TWA MAK; 180 mg/m3 TWA MAK	Not established

Exposure Limits/Guidelines (Con't.)						
	Result	**Ireland**	**Israel**	**NIOSH**	**Portugal**	**Spain**
Nitrous Oxide (10024-97-2)	TWAs	50 ppm TWA; 90 mg/m3 TWA	50 ppm TWA	25 ppm TWA (over the time exposed to waste anesthetic gas); 46 mg/m3 TWA (over the time exposed to waste anesthetic gas)	50 ppm TWA [VLE-MP]	50 ppm TWA [VLA-ED]; 92 mg/m3 TWA [VLA-ED]

Exposure Limits/Guidelines (Con't.)		
	Result	**Sweden**
Nitrous Oxide (10024-97-2)	STELs	500 ppm STV; 900 mg/m3 STV
	TWAs	100 ppm LLV; 180 mg/m3 LLV

Exposure Control Notations

Portugal

•Nitrous Oxide (10024-97-2): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

Germany DFG

•Nitrous Oxide (10024-97-2): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)

8.2 Exposure controls

Engineering

- Good general ventilation should be used. Ventilation rates should be matched to

Measures/Controls

conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Use explosion-proof - electrical, ventilating and/or lighting equipment.

Personal Protective Equipment

Respiratory

- 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.

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Gas	Appearance/Description	Colorless gas with slightly sweetish taste and odor.
Color	Colorless	Odor	Slightly sweetish.
Taste	Slightly sweetish.	Odor Threshold	Data lacking
General Properties			
Boiling Point	Data lacking	Melting Point	Data lacking
Decomposition Temperature	Data lacking	pH	Not relevant
Specific Gravity/Relative Density	Data lacking	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Not explosive.
Oxidizing Properties:	Oxidizing gas.		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	1.32 to 1.44 Air=1
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

- Storage in poorly ventilated areas. Storage near a heat source.

10.5 Incompatible materials

- Combustible materials, reducing agents.

10.6 Hazardous decomposition products

- None Nitrous oxide explosively decomposes at elevated temperatures (above 1200 deg. F, 650 deg. C) into nitrogen and oxygen. Decomposition will occur at lower temperatures in the presence of catalytic surfaces containing silver, copper and nickel oxides.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Component Name	CAS	Data
Oxygen (19.5% TO 50%)	7782-44-7	**Reproductive:** ihl-rat TCLo:10 pph/9H (22D preg)
Nitrous Oxide (50% TO 80.5%)	10024-97-2	**Mutagen:** mnt-hmn-ihl 1000 ug/L/18Y-I; oms-rat-ihl 50 pph/2D-C; **Reproductive:** ihl-rat TCLo:0.1 pph (1-19D preg)

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

Route(s) of entry/exposure

- Inhalation, Skin, Eye

Potential Health Effects

Inhalation

Acute (Immediate)

- May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death.

Chronic (Delayed)
- No data available

Skin

Acute (Immediate)
- Under normal conditions of use, no health effects are expected.

Chronic (Delayed)
- No data available

Eye

Acute (Immediate)
- Under normal conditions of use, no health effects are expected.

Chronic (Delayed)
- No data available

Ingestion

Acute (Immediate)
- Ingestion is not anticipated to be a likely route of exposure to this product.

Chronic (Delayed)
- Ingestion is not anticipated to be a likely route of exposure to this product.

Key to abbreviations
TC = Toxic Concentration

Section 12 - Ecological Information

12.1 Toxicity

- Oxygen occurs naturally in the atmosphere. The gas will be dissipated rapidly in well ventilated areas.

12.2 Persistence and degradability

- No data available

12.3 Bioaccumulative potential

- No data available

12.4 Mobility in Soil

- No data available

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

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	UN3156	Compressed gas, oxidizing, n.o.s. (Nitrous Oxide, Oxygen)	2.2	NDA	NDA

TDG	UN3156	COMPRESSED GAS, OXIDIZING, N.O.S. (Nitrous Oxide, Oxygen)	2.2	NDA	NDA
IMO/IMDG	UN3156	COMPRESSED GAS, OXIDIZING, N.O.S. (Nitrous Oxide, Oxygen)	2.2	NDA	NDA
IATA/ICAO	UN3156	Compressed gas, oxidizing, n.o.s. (Nitrous Oxide, 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, Fire

State Right To Know				
Component	**CAS**	**MA**	**NJ**	**PA**
Nitrous Oxide	10024-97-2	Yes	Yes	Yes
Oxygen	7782-44-7	Yes	Yes	Yes

Inventory						
Component	**CAS**	**Canada DSL**	**Canada NDSL**	**China**	**EU EINECS**	**EU ELNICS**
Nitrous Oxide	10024-97-2	Yes	No	Yes	Yes	No
Oxygen	7782-44-7	Yes	No	Yes	Yes	No

Inventory (Con't.)		
Component	**CAS**	**TSCA**
Nitrous Oxide	10024-97-2	Yes
Oxygen	7782-44-7	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

• Nitrous Oxide	10024-97-2	A, C, D2A
• Oxygen	7782-44-7	A, C

Canada - WHMIS - Ingredient Disclosure List

• Nitrous Oxide	10024-97-2	0.1 %
• Oxygen	7782-44-7	Not Listed

Environment

Canada - 2004 NPRI (National Pollutant Release Inventory)

• Nitrous Oxide	10024-97-2	Not Listed

• Oxygen	7782-44-7	Not Listed

Canada - 2005 NPRI (National Pollutant Release Inventory)

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

Canada - CEPA - Greenhouse Gases Subject to Mandatory Reporting

• Nitrous Oxide	10024-97-2	310 GWP
• Oxygen	7782-44-7	Not Listed

Canada - CEPA - Priority Substances List

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

Canada - DWQ (Drinking Water Quality) - IMACs

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

Other

Canada - Accelerated Reduction/Elimination of Toxics (ARET)

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

Canada New Brunswick

Environment

Canada - New Brunswick - Ozone Depleting Substances - Schedule A

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

Canada - New Brunswick - Ozone Depleting Substances - Schedule B

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

China

Environment

China - Ozone Depleting Substances - First Schedule

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

China - Ozone Depleting Substances - Second Schedule

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

China - Ozone Depleting Substances - Third Schedule

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

Other

China - Annex I & II - Controlled Chemicals Lists

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

China - Dangerous Goods List

• Nitrous Oxide	10024-97-2	(including refrigerated liquid)
• Oxygen	7782-44-7	(compressed or refrigerated liquid)

China - Export Control List - Part I Chemicals

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

Europe

Other

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	O; R8

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	O R:8 S:(2)-17

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	S:(2)-17

Germany

Environment

Germany - TA Luft - Types and Classes

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

Germany - Water Classification (VwVwS) - Annex 1

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	ID Number 743, not considered hazardous to water

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

• Nitrous Oxide	10024-97-2	ID Number 767, hazard class 1 - low hazard to waters
• Oxygen	7782-44-7	Not Listed

Germany - Water Classification (VwVwS) - Annex 3

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

Other

Germany - Specifically Regulated Chemicals in TRGS

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

Portugal

Other

Portugal - Prohibited Substances

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

United Kingdom

Environment

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

• Nitrous Oxide	10024-97-2	10000 kg
• Oxygen	7782-44-7	Not Listed

United Kingdom - Substances Contained in Dangerous Substances or Preparations

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

Other

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

United Kingdom - List of Dangerous Substances in Water

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

United States

Labor

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

Environment

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

United States - California

Environment

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

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

• Nitrous Oxide	10024-97-2	developmental toxicity, initial date 8/1/08
• Oxygen	7782-44-7	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

United States - Pennsylvania

Labor

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

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

• Nitrous Oxide	10024-97-2	Not Listed
• Oxygen	7782-44-7	Not Listed

15.2 Chemical Safety Assessment

- 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)

- 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.

Last Revision Date

- 14/January/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