



# Oxygen (0.0015-19.49%), Methane (0.0005-2.5%), Carbon Monoxide (0.001-0.09%), Hydrogen Sulfide (0.001-0.025%) in Nitrogen Balance

## Safety Data Sheet 50018

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 03/12/2015 Revision date: 12/19/2017 Supersedes: 07/20/2016 Version 1.4

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixtures  
Product name : Oxygen (0.0015-19.49%), Methane (0.0005-2.5%), Carbon Monoxide (0.001-0.09%), Hydrogen Sulfide (0.001-0.025%) in Nitrogen Balance

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Test gas/Calibration gas.

#### 1.3. Supplier

Calgaz, division of Airgas USA LLC  
821 Chesapeake Drive  
Cambridge, 21613 - USA  
T 1-410-228-6400 - F 1-410-228-4251  
info@calgaz.com - www.Calgaz.com

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300  
Internationally: 1-703-527-3887

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

GHS-US classification : H280 Contains gas under pressure; may explode if heated  
Gases under pressure : Compressed gas  
Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

GHS-US labeling :  
Hazard pictograms (GHS-US) :



GHS04

Signal word (GHS-US) : Warning  
Hazard statements (GHS-US) : H280 - Contains gas under pressure; may explode if heated  
OSHA-H01 - May displace oxygen and cause rapid suffocation  
CGA-HG16 - Extended exposure to gas reduces the ability to smell sulfides.  
Precautionary statements (GHS-US) : P202 - Do not handle until all safety precautions have been read and understood.  
P271 - Use only outdoors or in a well-ventilated area.  
P280 - Wear eye protection, face protection, protective gloves, protective clothing.  
P308+P313 - If exposed or concerned: Get medical advice/attention.  
P403 - Store in a well-ventilated place.  
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C/125°F  
CGA-PG05 - Use a back flow preventive device in the piping  
CGA-PG06 - Close valve after each use and when empty  
CGA-PG10 - Use only with equipment rated for cylinder pressure  
CGA-PG14 - Approach suspected leak area with caution  
CGA-PG21 - Open valve slowly  
CGA-PG29 - Do not depend on odor to detect presence of gas

#### 2.3. Other hazards which do not result in classification

No additional information available

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#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Nitrogen	(CAS-No) 7727-37-9	77 895 - 99 9965	Press. Gas (Comp.), H280
Oxygen	(CAS-No) 7782-44-7	0 0015 - 19 49	Ox. Gas 1, H270 Press. Gas (Comp.), H280
Methane	(CAS-No) 74-82-8	0 0005 - 2 5	Flam. Gas 1, H220 Press. Gas (Comp.), H280
Carbon monoxide	(CAS-No) 630-08-0	0 0005 - 0 09	Flam. Gas 1, H220 Press. Gas (Comp.), H280 Acute Tox. 3 (Inhalation gas), H331 Repr. 1A, H360 STOT RE 1, H372
Hydrogen Sulfide	(CAS-No) 7783-06-4	0 001 - 0 025	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Acute Tox. 2 (Inhalation gas), H330 STOT SE 3, H335 Aquatic Acute 1, H400

Full text of hazard classes and H-statements : see section 16

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.  
First-aid measures after skin contact : Adverse effects not expected from this product.  
First-aid measures after eye contact : Adverse effects not expected from this product.  
First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

#### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May displace oxygen and cause rapid suffocation.  
Symptoms/effects after skin contact : Adverse effects not expected from this product.  
Symptoms/effects after eye contact : Adverse effects not expected from this product.  
Symptoms/effects after ingestion : Ingestion is not considered a potential route of exposure.  
Symptoms/effects upon intravenous administration : Not known.  
Chronic symptoms : Adverse effects not expected from this product.  
Most important symptoms and effects, both acute and delayed : No effect on living tissue. Refer to section 11.

#### 4.3. Immediate medical attention and special treatment, if necessary

If you feel unwell, seek medical advice. If breathing is difficult, give oxygen.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire  
Unsuitable extinguishing media : Do not use water jet to extinguish.

#### 5.2. Specific hazards arising from the chemical

Fire hazard : The product is not flammable.  
Explosion hazard : Product is not explosive. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.  
Reactivity : None known.  
Hazardous combustion products : Carbon monoxide. Sulphur dioxide.

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<b>5.3. Special protective equipment and precautions for fire-fighters</b>	
Firefighting instructions	: In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.
Protection during firefighting	: Standard protective clothing and equipment (e.g. Self Contained Breathing Apparatus) for fire fighters. Do not enter fire area without proper protective equipment, including respiratory protection.
Specific methods	: Exposure to fire may cause containers to rupture/explode. If possible, stop flow of product. Continue water spray from protected position until container stays cool. Move containers away from the fire area if this can be done without risk.

## SECTION 6: Accidental release measures

<b>6.1. Personal precautions, protective equipment and emergency procedures</b>	
General measures	: Ensure adequate ventilation.
<b>6.1.1. For non-emergency personnel</b>	
Protective equipment	: Wear protective equipment consistent with the site emergency plan.
Emergency procedures	: Evacuate personnel to a safe area. Close doors and windows of adjacent premises. Keep containers closed. Mark the danger area. Seal off low-lying areas. Keep upwind.
<b>6.1.2. For emergency responders</b>	
Protective equipment	: Standard protective clothing and equipment (e.g. Self Contained Breathing Apparatus) for fire fighters. Equip cleanup crew with proper protection.
Emergency procedures	: Evacuate and limit access. Ventilate area.
<b>6.2. Environmental precautions</b>	
Try to stop release if without risk	
<b>6.3. Methods and material for containment and cleaning up</b>	
For containment	: Try to stop release if without risk.
Methods for cleaning up	: Dispose of contents/container in accordance with local/regional/national/international regulations.
Methods and material for containment and cleaning up	: None.
<b>6.4. Reference to other sections</b>	
See also Sections 8 and 13.	

## SECTION 7: Handling and storage

<b>7.1. Precautions for safe handling</b>	
Additional hazards when processed	: Pressurized container. Do not pierce or burn, even after use. Use only with equipment rated for cylinder pressure. Close valve after each use and when empty.
Precautions for safe handling	: Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area.
Safe handling of the gas receptacle	: Protect cylinders from physical damage; do not drag, roll, slide or drop. Do not remove or deface labels provided by the supplier for the identification of the cylinder contents.
Safe use of the product	: The product must be handled in accordance with good industrial hygiene and safety procedures. Only experienced and properly instructed persons should handle gases under pressure. Consider pressure relief device(s) in gas installations. Ensure the complete gas system was (or is regularly) checked for leaks before use. Do not remove or deface labels provided by the supplier for the identification of the cylinder contents. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Hygiene measures	: Do not eat, drink or smoke when using this product.
<b>7.2. Conditions for safe storage, including any incompatibilities</b>	
Technical measures	: Comply with applicable regulations.
Storage conditions	: Do not expose to temperatures exceeding 52 °C/ 125 °F. Keep container closed when not in use. Protect cylinders from physical damage, do not drag, roll, slide or drop. Store in well ventilated area.
Incompatible products	: None known.
Incompatible materials	: None known.

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Conditions for safe storage, including any incompatibilities	: Observe all regulations and local requirements regarding storage of containers. Containers should not be stored in conditions likely to encourage corrosion. Container valve guards or caps should be in place. Containers should be stored in the vertical position and properly secured to prevent them from falling over. Stored containers should be periodically checked for general condition and leakage. Keep container below 50 °C in a well ventilated place. Store containers in location free from fire risk and away from sources of heat and ignition. Keep away from combustible materials.
Storage area	: Store away from heat. Store in a well-ventilated place.

## SECTION 8: Exposure controls/personal protection

<b>8.1. Control parameters</b>		
<b>Nitrogen (7727-37-9)</b>		
Not applicable		
<b>Methane (74-82-8)</b>		
Not applicable		
<b>Hydrogen Sulfide (7783-06-4)</b>		
ACGIH	ACGIH TWA (ppm)	1 ppm
ACGIH	ACGIH STEL (ppm)	5 ppm
OSHA	OSHA PEL (Ceiling) (ppm)	20 ppm
OSHA	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	50 ppm Peak (10 minutes once, only if no other measurable exposure occurs)
IDLH	US IDLH (ppm)	100 ppm
NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
NIOSH	NIOSH REL (ceiling) (ppm)	10 ppm
<b>Oxygen (7782-44-7)</b>		
Not applicable		
<b>Carbon monoxide (630-08-0)</b>		
ACGIH	ACGIH TWA (ppm)	25 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	55 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	50 ppm
IDLH	US IDLH (ppm)	1200 ppm
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	40 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (ppm)	35 ppm
NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	229 mg/m <sup>3</sup>
NIOSH	NIOSH REL (ceiling) (ppm)	200 ppm

<b>8.2. Appropriate engineering controls</b>	
Appropriate engineering controls	: Ensure exposure is below occupational exposure limits (where available). Provide adequate general and local exhaust ventilation. Systems under pressure should be regularly checked for leakages. Oxygen detectors should be used when asphyxiating gases may be released. Consider the use of a work permit system e.g. for maintenance activities.
Environmental exposure controls	: Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment.

<b>8.3. Individual protection measures/Personal protective equipment</b>	
<b>Hand protection:</b>	
Wear working gloves when handling gas containers. 29 CFR 1910.138: Hand protection	
<b>Eye protection:</b>	
Wear safety glasses with side shields. 29 CFR 1910.133: Eye and Face Protection	

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## Skin and body protection:

Wear suitable protective clothing, e.g. lab coats, coveralls or flame resistant clothing.

## Respiratory protection:

None necessary during normal and routine operations. See Sections 5 & 6.

## Thermal hazard protection:

None necessary during normal and routine operations.

## Other information:

Wear safety shoes while handling containers. 29 CFR 1910.136: Foot Protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Gas
Appearance	: Clear, colorless gas.
Color	: Colorless
Odor	: Rotten eggs
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Relative gas density	: Similar to air
Solubility	: Water: No data available
Log Pow	: Not applicable for gas-mixtures. Not applicable for gas-mixtures.
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: Not applicable (non-flammable gas)
Oxidizing properties	: None.

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

None known.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

None known.

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## 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

## 10.5. Incompatible materials

None known.

## 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Nitrogen (7727-37-9)	
LC50 inhalation rat (ppm)	820000 ppmV/4h
ATE US (gases)	820000.000 ppmV/4h
Methane (74-82-8)	
LC50 inhalation rat (ppm)	820000 ppmV/4h
ATE US (gases)	820000.000 ppmV/4h
Hydrogen Sulfide (7783-06-4)	
LC50 inhalation rat (mg/l)	700 mg/m <sup>3</sup> (Exposure time: 4 h)
LC50 inhalation rat (ppm)	356 ppm/4h
ATE US (gases)	356.000 ppmV/4h
ATE US (vapors)	0.990 mg/l/4h
ATE US (dust, mist)	0.990 mg/l/4h
Oxygen (7782-44-7)	
LC50 inhalation rat (ppm)	800000 ppmV/4h
ATE US (gases)	800000.000 ppmV/4h
Carbon monoxide (630-08-0)	
LC50 inhalation rat (ppm)	1880 ppm/4h
ATE US (gases)	1880.000 ppmV/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified

Specific target organ toxicity – repeated exposure	: Not classified
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Aspiration hazard	: Not classified
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Symptoms/effects after inhalation	: May displace oxygen and cause rapid suffocation
Symptoms/effects after skin contact	: Adverse effects not expected from this product.
Symptoms/effects after eye contact	: Adverse effects not expected from this product.
Symptoms/effects after ingestion	: Ingestion is not considered a potential route of exposure.
Symptoms/effects upon intravenous administration	: Not known.
Chronic symptoms	: Adverse effects not expected from this product.

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**SECTION 12: Ecological Information**

**12.1. Toxicity**

Ecology - general : No ecological damage caused by this product.

<b>Methane (74-82-8)</b>	
LC50-96 h - fish [mg/l]	147.5 mg/l
EC50 48h - Daphnia magna [mg/l]	69.4 mg/l
EC50 72h Algae [mg/l]	19.4 mg/l
<b>Hydrogen Sulfide (7783-06-4)</b>	
LC50 fish 1	0.0448 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus (flow-through))
LC50 fish 2	0.016 mg/l (Exposure time: 96 h - Species: Pimephales promelas (flow-through))
LC50-96 h - fish [mg/l]	0.007 - 0.019 mg/l
EC50 48h - Daphnia magna [mg/l]	0.12 mg/l
EC50 72h Algae [mg/l]	1.87 mg/l
<b>Carbon monoxide (630-08-0)</b>	
LC50-96 h - fish [mg/l]	Study scientifically unjustified.
EC50 48h - Daphnia magna [mg/l]	Study scientifically unjustified.
EC50 72h Algae [mg/l]	Study scientifically unjustified.

**12.2. Persistence and degradability**

<b>Oxygen (0.0015-19.49%), Methane (0.0005-2.5%), Carbon Monoxide (0.001-0.09%), Hydrogen Sulfide (0.001-0.025%) in Nitrogen Balance</b>	
Persistence and degradability	No data available.
<b>Nitrogen (7727-37-9)</b>	
Persistence and degradability	No ecological damage caused by this product.
<b>Methane (74-82-8)</b>	
Persistence and degradability	The substance is readily biodegradable. Unlikely to persist.
<b>Hydrogen Sulfide (7783-06-4)</b>	
Persistence and degradability	Not applicable for inorganic gases.
<b>Oxygen (7782-44-7)</b>	
Persistence and degradability	No ecological damage caused by this product.
<b>Carbon monoxide (630-08-0)</b>	
Persistence and degradability	Will not undergo hydrolysis. Not readily biodegradable. Not applicable for inorganic gases.

**12.3. Bioaccumulative potential**

<b>Oxygen (0.0015-19.49%), Methane (0.0005-2.5%), Carbon Monoxide (0.001-0.09%), Hydrogen Sulfide (0.001-0.025%) in Nitrogen Balance</b>	
Log Pow	Not applicable for gas-mixtures.
Log Kow	Not applicable for gas-mixtures.
Bioaccumulative potential	No data available.
<b>Nitrogen (7727-37-9)</b>	
Log Pow	Not applicable for inorganic gases.
Bioaccumulative potential	No ecological damage caused by this product.
<b>Methane (74-82-8)</b>	
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.
<b>Hydrogen Sulfide (7783-06-4)</b>	
BCF fish 1	(no bioaccumulation expected)
Log Pow	Not applicable for inorganic gases.
Bioaccumulative potential	No data available.
<b>Oxygen (7782-44-7)</b>	
Log Pow	Not applicable for inorganic gases.
Bioaccumulative potential	No ecological damage caused by this product.
<b>Carbon monoxide (630-08-0)</b>	
Log Pow	1.78

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<b>Carbon monoxide (630-08-0)</b>	
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.
<b>12.4. Mobility in soil</b>	
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Mobility in soil	No data available.
<b>Nitrogen (7727-37-9)</b>	
Ecology - soil	No ecological damage caused by this product.
<b>Methane (74-82-8)</b>	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
<b>Hydrogen Sulfide (7783-06-4)</b>	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
<b>Oxygen (7782-44-7)</b>	
Ecology - soil	No ecological damage caused by this product.
<b>Carbon monoxide (630-08-0)</b>	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.

**12.5. Other adverse effects**

Effect on ozone layer : No known effects from this product.

**SECTION 13: Disposal considerations**

**13.1. Disposal methods**

Waste treatment methods : Contact supplier if guidance is required. Do not discharge into any place where its accumulation could be dangerous. Ensure that the emission levels from local regulations or operating permits are not exceeded.

Product/Packaging disposal recommendations : Refer to the CGA Pamphlet P-63 "Disposal of Gases" available at [www.cganet.com](http://www.cganet.com) for more guidance on suitable disposal methods.

**SECTION 14: Transport information**

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1956 Compressed gas, n.o.s. (Nitrogen, Oxygen), 2.2

UN-No (DOT) : UN1956  
 Proper Shipping Name (DOT) : Compressed gas, n.o.s.  
 Class (DOT) : 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115  
 Hazard labels (DOT) : 2.2 - Non-flammable gas



DOT Packaging Non Bulk (49 CFR 173.xxx) : 302;305  
 DOT Packaging Bulk (49 CFR 173.xxx) : 314;315  
 DOT Symbols : G - Identifies PSN requiring a technical name  
 DOT Packaging Exceptions (49 CFR 173.xxx) : 306;307  
 DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 75 kg  
 DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 150 kg  
 DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.  
 Other information : No supplementary information available.

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**Special transport precautions** : Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: - Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure cylinder valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.

## Transportation of Dangerous Goods

**Transport document description** : UN1956 Compressed gas, n.o.s., 2.2  
**UN-No (TDG)** : UN1956  
**Proper Shipping Name** : Compressed gas, n.o.s.  
**TDG Primary Hazard Classes** : 2.2 - Class 2.2 - Non-Flammable, Non-Toxic Gas.  
**TDG Special Provisions** : 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a)UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S.; (b)UN1851, MEDICINE, LIQUID, TOXIC, N.O.S.; (c)UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S.; (d)UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S.; or (e)UN3249, MEDICINE, SOLID, TOXIC, N.O.S. An example in Canada is the "Food and Drugs Act". (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a)UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b)UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS. SOR/2014-306, 148 - (1) Part 5 (Means of Containment) does not apply to radiation detectors that contain these dangerous goods in non-refillable pressure receptacles if (a)the working pressure in each receptacle is less than 5 000 KPa; (b)the capacity of each receptacle is less than 12 L; (c)each receptacle has a minimum burst pressure of (i)at least 3 times the working pressure, when the receptacle is fitted with a relief device, or (ii)at least 4 times the working pressure, when the receptacle is not fitted with a relief device; (d)each receptacle is manufactured from material that will not fragment upon rupture; (e)each detector is manufactured under a quality assurance program; ISO 9001:2008 is an example of a quality assurance program. (f)the detectors are transported in strong outer means of containment, and (g)a detector in its outer means of containment is capable of withstanding a 1.2 m drop test without breakage of the detector or rupture of the outer means of containment. (2)Part 5 (Means of Containment) does not apply to radiation detectors that contain these dangerous goods in non-refillable pressure receptacles and that are included in equipment, if (a)the conditions set out in paragraphs (1)(a) to (e) are met; and (b)the equipment is contained in a strong outer means of containment or the equipment affords the detectors with protection that is equivalent to that provided by a strong outer means of containment. (3)These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2 (Classification), do not apply to radiation detectors that contain these dangerous goods in non-refillable pressure receptacles, including detectors in radiation detection systems, if the detectors meet the requirements of subsection (1) or (2), as applicable, and the capacity of the receptacles that contain the detectors is less than 50 mL. SOR/2014-306

**Explosive Limit and Limited Quantity Index** : 0.125 L  
**Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index** : 75 L

## Transport by sea

**Transport document description (IMDG)** : UN 1956 COMPRESSED GAS, N.O.S., 2  
**UN-No (IMDG)** : 1956  
**Proper Shipping Name (IMDG)** : COMPRESSED GAS, N.O.S.  
**Class (IMDG)** : 2 - Gases  
**Limited quantities (IMDG)** : 120 ml

## Air transport

**Transport document description (IATA)** : UN 1956 COMPRESSED GAS, N.O.S., 2.2

12/19/2017 EN (English US) SDS ID: 50018 9/12

# Oxygen (0.0015-19.49%), Methane (0.0005-2.5%), Carbon Monoxide (0.001-0.09%), Hydrogen Sulfide (0.001-0.025%) in Nitrogen Balance Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**UN-No. (IATA)** : 1956  
**Proper Shipping Name (IATA)** : COMPRESSED GAS, N.O.S.  
**Class (IATA)** : 2

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

<b>Nitrogen (7727-37-9)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Methane (74-82-8)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Hydrogen Sulfide (7783-06-4)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on the United States SARA Section 302	
Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb
Section 302 EPCRA Reportable Quantity (RQ)	100 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb
SARA Section 313 - Emission Reporting	1 %
<b>Oxygen (7782-44-7)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Carbon monoxide (630-08-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

### 15.2. International regulations

#### CANADA

<b>Nitrogen (7727-37-9)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>Methane (74-82-8)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>Hydrogen Sulfide (7783-06-4)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>Oxygen (7782-44-7)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>Carbon monoxide (630-08-0)</b>	
Listed on the Canadian DSL (Domestic Substances List)	

#### EU-Regulations

<b>Nitrogen (7727-37-9)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>Methane (74-82-8)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>Hydrogen Sulfide (7783-06-4)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>Oxygen (7782-44-7)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>Carbon monoxide (630-08-0)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	

#### National regulations

12/19/2017 EN (English US) SDS ID: 50018 10/12

**Oxygen (0.0015-19.49%), Methane (0.0005-2.5%), Carbon Monoxide (0.001-0.09%), Hydrogen Sulfide (0.001-0.025%) in Nitrogen Balance**  
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<b>Nitrogen (7727-37-9)</b>
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

<b>Methane (74-82-8)</b>
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on CIRC (Turkish Inventory and Control of Chemicals) Listed on the TCSI (Taiwan Chemical Substance Inventory)

<b>Hydrogen Sulfide (7783-06-4)</b>
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the Canadian IDL (Ingredient Disclosure List) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

<b>Oxygen (7782-44-7)</b>
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

<b>Carbon monoxide (630-08-0)</b>
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the Canadian IDL (Ingredient Disclosure List) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

<b>Carbon monoxide (630-08-0)</b>				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	Yes	No	No	

<b>Nitrogen (7727-37-9)</b>
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right To Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

**Oxygen (0.0015-19.49%), Methane (0.0005-2.5%), Carbon Monoxide (0.001-0.09%), Hydrogen Sulfide (0.001-0.025%) in Nitrogen Balance**  
Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Methane (74-82-8)</b>
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

<b>Hydrogen Sulfide (7783-06-4)</b>
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

<b>Oxygen (7782-44-7)</b>
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

<b>Carbon monoxide (630-08-0)</b>
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

**SECTION 16: Other information**

Revision date	12/19/2017
Other information	This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this product.

Full text of H-phrases:

H220	Extremely flammable gas
H270	May cause or intensify fire, oxidizer
H280	Contains gas under pressure; may explode if heated
H330	Fatal if inhaled
H331	Toxic if inhaled
H335	May cause respiratory irritation
H360	May damage fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life

SDS US (GHS HazCom 2012)

*This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this gas mixture. To the best of Calgas'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.*