

## 19.5% to 23.5% Oxygen in Nitrogen

### 1 PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** 19.5% to 23.5% Oxygen in Nitrogen  
**Synonyms:** None  
**Common Name:** Oxygen in Nitrogen  
**SDS Number:** NLB 2255  
**Revision Date:** 7/25/2018  
**Version:** 3  
**CAS Number:** MIXTURE  
**EPA Number:** Not Available  
**Chemical Family:** Gas Mixture  
**Chemical Formula:** O<sub>2</sub> + N<sub>2</sub>  
**Product Use:** Calibration of analytical instrumentation

**Supplier Details:** NorLab a division of Norco  
 898 W. Gowen Rd.  
 Boise, ID 83705

**Contact:** Quality Dept.  
**Phone:** 208-336-1643  
**Internet:** [www.norlab-gas.com](http://www.norlab-gas.com)

For Transportation Emergency Contact CHEMTREC: 800-424-9300

### 2 HAZARDS IDENTIFICATION

#### Classification of Substance

**GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):**  
 Physical, Gases Under Pressure, Compressed Gas

#### GHS Label Elements, Including Precautionary Statements

**GHS Signal Word:** **WARNING**

**GHS Hazard Pictograms:**



#### GHS Hazard Statements:

H280 - Contains gas under pressure; may explode if heated  
 CGA-HG24 - SUPPORTS COMBUSTION.

#### GHS Precautionary Statements:

P202 - Do not handle until all safety precautions have been read and understood.  
 P281 - Use personal protective equipment as required.  
 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-PG20 - Use only equipment of compatible materials of construction.  
 CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52 °C (125 °F).

#### Hazards not Otherwise Classified (HNOC) or not Covered by GHS

**Inhalation:** None expected. This product contains sufficient oxygen to sustain life. This product is not intended for use as breathing air.

**Skin Contact:** Non-irritating. Contact with rapidly expanding gas near the point of release may cause frostbite with redness, skin color change to gray or white, and blistering.

**Eye Contact:** Non-irritating. Contact with rapidly expanding gas near the point of release may cause frostbite.

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**Ingestion:** Not anticipated. Product is a gas at normal conditions.

### 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients		
CAS#	%	Chemical Name
7782-44-7	19.5-23.50%	Oxygen
7727-37-9	76.5-80.5%	Nitrogen

### 4 FIRST AID MEASURES

**Inhalation:** Not considered dangerous.

**Skin Contact:** Non-irritating. None required for gas. For frostbite, immerse skin in lukewarm water. **DO NOT USE HOT WATER.** Obtain medical attention.

**Eye Contact:** Non-irritating. None Required for gas. If frostbite is suspected, flush eyes with cool water for 15 minutes and obtain immediate medical attention.

**Ingestion:** Not a direct hazard.

### 5 FIRE FIGHTING MEASURES

**Flammability:** Not Flammable

**Flash Point:** None

**Flash Point Method:** Not Applicable

**Burning Rate:** Not Applicable

**Autoignition Temperature:** None

**Lower Explosive Limit:** None

**Upper Explosive Limit:** None

**Fire and Explosion Hazards:**  
Nonflammable. Cylinders may rupture violently or vent rapidly from pressure when involved in a fire situation.

**Extinguishing Media:**  
None required. Use as appropriate for surrounding materials

**Fire Fighting Instructions:**  
Use water spray to cool adjacent cylinders and areas. Firefighters should wear respiratory protection (SCBA) and full turnout or Bunker gear. Continue to cool fire-exposed cylinders until well after flames are extinguished.

### 6 ACCIDENTAL RELEASE MEASURES

No hazard expected. If a leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. If leak is in container valve, contact the appropriate emergency telephone number listed in Section 1 or call your closest Norco/NorLab location.

### 7 HANDLING AND STORAGE

**Handling Precautions:** Valve protection caps must remain in place unless the cylinder is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure regulator when connecting cylinder to lower pressure (<3000 PSIG) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous backflow

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into the cylinder.

**Storage Requirements:** Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavy traffic areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 125 degrees F (52 degrees C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders from being stored for excessive periods of time.

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### EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Use mechanical (general) ventilation for storage areas.

**Personal Protective Equipment:** HMIS PP, B | Safety Glasses, Gloves  
Chemical safety glasses; Gloves; Steel toed safety shoes or boots

Oxygen cas#:(7782-44-7) [19.5-23.50%]  
OSHA PEL: Not Available  
ACGIH PEL: Not Available  
LC<sub>50</sub> : Not Available  
IDLH: Not Available

Nitrogen cas#:(7727-37-9) [76.5-80.5%]  
OSHA PEL: None Established  
ACGIH PEL: Simple Asphyxiant  
LC<sub>50</sub> or LD<sub>50</sub>: Not Available  
IDLH: None Established

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### PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Colorless Gas	<b>Odor:</b>	Odorless
<b>Physical State:</b>	Gas	<b>Molecular Formula:</b>	O <sub>2</sub> + N <sub>2</sub>
<b>Odor Threshold:</b>	Not Applicable	<b>Solubility:</b>	Negligible
<b>Particle Size:</b>	Not Applicable	<b>Softening Point:</b>	Not Applicable
<b>Specific Gravity or Density:</b>	1 (Air = 1)	<b>Percent Volatile:</b>	100%
<b>Viscosity:</b>	Not Applicable	<b>Freezing or Melting Point:</b>	-209.9 C (345.9 F)
<b>Boiling Point:</b>	-195.8 C (-320.4 F)	<b>Flash Point:</b>	Not Available
<b>Flammability:</b>	Not Flammable	<b>Upper Flammability Limit and Lower Flammability Limit:</b>	N/A

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### STABILITY AND REACTIVITY

**Chemical Stability:** Stable

**Conditions to Avoid:** Avoid open flames and high temperatures.

**Materials to Avoid:** None

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

**Hazardous Polymerization:** Will not occur.

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### TOXICOLOGICAL INFORMATION

Oxygen cas#:(7782-44-7) [19.5-23.50%]

Information on toxicological effects

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**Acute toxicity:**

Oral LD50 no data available

Inhalation LC50

Dermal LD50

Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

**Carcinogenicity:**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Signs and Symptoms of Exposure: Nausea, Dizziness, Unconsciousness, May be harmful.

Synergistic effects: no data available

Additional Information: RTECS: RS2060000

Nitrogen cas#:(7727-37-9) [76.5-80.5%]

**Information on toxicological effects****Acute toxicity:**

Oral LD50 no data available

Inhalation LC50

Dermal LD50

Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

**Carcinogenicity:**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Signs and Symptoms of Exposure: May be harmful., Nausea, Headache, Vomiting

Synergistic effects: no data available

Additional Information: RTECS: QW9700000

**12****ECOLOGICAL INFORMATION**

Oxygen cas#:(7782-44-7) [19.5-23.50%]

**Information on ecological effects**

Toxicity: no data available

Persistence and degradability: no data available

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Bioaccumulative potential: no data available  
Mobility in soil: no data available  
PBT and vPvB assessment: no data available  
Other adverse effects: no data available

Nitrogen cas#:(7727-37-9) [76.5-80.5%]

Information on ecological effects  
Toxicity: no data available  
Persistence and degradability: no data available  
Bioaccumulative potential: no data available  
Mobility in soil: no data available  
PBT and vPvB assessment: no data available  
Other adverse effects: no data available

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### DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations. Do not attempt to dispose of waste or unused quantities in returnable cylinders. Return in the shipping container, properly labeled, with any valve outlet plugs or caps secure and valve protection cap in place to NorLab for proper disposal. Non-refillable containers should be vented in a well-ventilated area then disposed of in compliance with local regulations, or returned to NorLab.

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### TRANSPORT INFORMATION

Proper Shipping Name US:  
UN1956, Compressed Gas, N.O.S., (Oxygen, Nitrogen), 2.2

Proper Shipping Name Canada:  
UN1956, Compressed Gas, N.O.S., (Oxygen, Nitrogen), 2.2



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### REGULATORY INFORMATION

Component (CAS#) [%] - CODES

Oxygen (7782-44-7) [19.5-23.50%] MASS, PA, TSCA

Nitrogen (7727-37-9) [76.5-80.5%] MASS, PA, TSCA

Regulatory CODE Descriptions

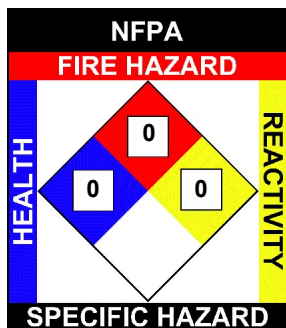
MASS = MA Massachusetts Hazardous Substances List  
PA = PA Right-To-Know List of Hazardous Substances  
TSCA = Toxic Substances Control Act

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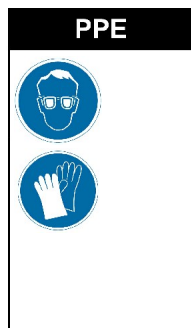
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### OTHER INFORMATION

**NFPA:** Health = 0, Fire = 0, Reactivity = 0, Specific Hazard = n/a  
**HMIS III:** Health = 0, Fire = 0, Physical Hazard = 3  
**HMIS PPE:** B - Safety Glasses, Gloves



HMIS	
HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	3
PERSONAL PROTECTION	B



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**Revision Date: 7/25/2018**