

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: O₂ + N₂
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

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.

19.5% to 23.5% Oxygen in Nitrogen

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.

8 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
LC₅₀ : Not Available
IDLH: Not Available

Nitrogen cas#:(7727-37-9) [76.5-80.5%]
OSHA PEL: None Established
ACGIH PEL: Simple Asphyxiant
LC₅₀ or LD₅₀: Not Available
IDLH: None Established

9 PHYSICAL AND CHEMICAL PROPERTIES

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

10 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.

11 TOXICOLOGICAL INFORMATION

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

Information on toxicological effects

19.5% to 23.5% Oxygen in Nitrogen

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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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

19.5% to 23.5% Oxygen in Nitrogen

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

13

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.

14

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



15

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

19.5% to 23.5% Oxygen in Nitrogen

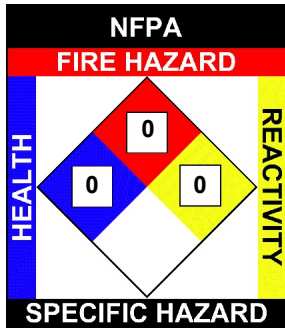
16

OTHER INFORMATION

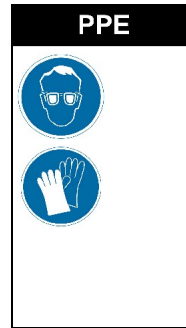
NFPA: Health = 0, Fire = 0, Reactivity = 0, Specific Hazard = n/a

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



Disclaimer:

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