

MATERIAL SAFETY DATA SHEET

Oxygen in Nitrogen



File No.: 1014

Oxygen in Nitrogen:
0.0001% to 23.5% Oxygen in Nitrogen

1. Chemical Product and Company Identification

SpecAir Specialty Gases, Chemicals & Technology
22 Albiston Way
Auburn, ME
04210

TELEPHONE NUMBER: 800-292-6218
FAX NUMBER: 207-777-6215
E-MAIL: info@SpecAir.com

24-HOUR EMERGENCY NUMBER: 1-800-535-5053

PRODUCT NAME: Oxygen in Nitrogen
CHEMICAL NAME: Oxygen, Nitrogen
COMMON NAMES/ SYNONYMS: N/A
TDG (Canada) CLASSIFICATION: 2.2
WHIMIS CLASSIFICATION: A

2. Composition / Information on Ingredients

	% VOLUME	PEL-OSHA2	TLV-ACGIH3	LD50 OR LC50 Route/Species
Oxygen Formula: O2 CAS: 7782-44-7 RTECS#: RS206000	0.0001% to 23.5%	None	None	Not Available
Nitrogen Formula: N2 CAS: 7727-37-9 RTECS#: QW9700000	76.5% to 99.9999%	None Established	None Established Simple Asphyxiant	Not Available

3. HAZARDS IDENTIFICATIONEMERGENCY OVERVIEW

Mixtures with less than 19.5% oxygen act as a simple asphyxiate. Effects may include headaches, dizziness and loss of consciousness. Elevated oxygen levels may result in cough and other pulmonary changes.

ROUTE OF ENTRY:

Skin Contact	Skin Absorption	Eye Contact	Inhalation	Ingestion
No	No	No	Yes	No

CARCINOGENICITY:

NTP: No

IARC: No

OSHA: No

EYE EFFECTS:

Contact with rapidly expanding gas near the point of release may cause frostbite.

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SKIN EFFECTS:

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

INGESTION EFFECTS:

Ingestion unlikely. Gas at room temperature.

INHALATION EFFECTS:

None expected. This product contains sufficient oxygen to sustain life. This product is not intended for use as breathing air unless labeled as CGA Grade D, CGA Grade E or U.S.P. Medical Air.

NFPA Hazard Codes

Health:	0
Flammability:	0
Reactivity:	0

HMIS Hazard Codes

Health:	0
Flammability:	0
Reactivity:	3

Rating System

0=	No Hazard
1=	Slight Hazard
2=	Moderate Hazard
3=	Serious Hazard
4=	Severe Hazard

4. FIRST AID MEASURES

EYES:

None required for gas. If frostbite is suspected, flush eyes with cool water for 15 minutes and obtain immediate medical attention.

SKIN:

None required for gas. For frostbite, immerse skin in lukewarm water. DO NOT USE HOT WATER. Obtain medical attention.

INGESTION:

Not anticipated; product is a gas.

INHALATION:

None required.

5. FIRE-FIGHTING MEASURES

Fire and Explosion Hazards:

Nonflammable. Cylinder may rupture violently from pressure when involved in a fire situation.

Extinguishing Media:

None required. Use as appropriate for surrounding materials.

Fire Fighting Instructions:

If possible, stop the flow of gas supply. Use water spray to cool adjacent cylinders and areas. Fire fighters should wear a full-face piece NIOSH/MSHA approved self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout gear.

6. ACCIDENTAL RELEASE MEASURES

Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with inert gas prior to attempting repairs. If leak is in container or valve, contact the appropriate emergency telephone number listed in section 1 or call your closest Maine Oxy / SpecAir location.

7. HANDLING AND STORAGE

Electrical classification:

Non-hazardous.

Do not use as breathing air.

Gas mixture is non-corrosive and may be used with all materials of construction. Moisture causes metal oxides which are formed with air to be hydrated so that they include volume and lose their protective role (rust formation). Concentrations of SO₂, Cl₂, salt, etc. in the moisture enhances the rusting of metals in air.



Use only in well-ventilated areas. 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 into the cylinder.

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area of non-combustible construction away from heavy traffic areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 125°F (52°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

For additional recommendations, consult Compressed Gas Association Pamphlet P-1.

Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid from in an enclosed space such as a car trunk, van or station wagon. A leak can result in a fire, explosion, asphyxiation or a toxic exposure.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

General Ventilation.

Eye/Face Protection:

Safety goggles or glasses as appropriate for the job.

Skin Protection:

Protective gloves of material appropriate for the job.

Respiratory Protection:

Positive pressure air line with full-face mask and escape bottle or self-contained breathing apparatus should be available for emergency use.

Other/General Protection:

Safety shoes

9. PHYSICAL AND CHEMICAL PROPERTIES

PARAMETER:	VALUE:
Physical state	: Gas
Evaporation point	: N/A
pH	: N/A
Odor and appearance	: Colorless, odorless gas

10. STABILITY AND REACTIVITY

Stable under normal conditions. Expected shelf life 36 months.

11. TOXICOLOGICAL INFORMATION

Product is non-toxic

12. ECOLOGICAL INFORMATION

No ecological damage is expected to be caused by this product.

13. DISPOSAL INFORMATION

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 Maine Oxy / SpecAir for proper disposal. Non-refillable containers should be vented in a well-ventilated area then disposed of in accordance with local regulations, or returned to Maine Oxy / SpecAir.

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File No.: 1014

14. TRANSPORT INFORMATION

	<u>United States DOT</u>	<u>Canada TDG</u>
Proper Shipping Name:	Compressed Gas N.O.S. (Oxygen, Nitrogen)	Compressed Gas N.O.S. (Oxygen, Nitrogen)
Hazard Class:	2.2	2.2
Identification Number:	UN1956	UN1956
Shipping Label:	Non-Flammable Gas	Non-Flammable Gas

15. REGULATORY INFORMATION

The components of this product are listed under the accident prevention provisions of section 112(r) of the Clean Air Act (CAA) with a threshold quantity (TQ) of 10,000 pounds each.

16. OTHER INFORMATION

This MSDS has been prepared in accordance with the Chemicals (Hazard Information and Packaging for Supply (Amendment) Regulation 1996. The information is based on the best knowledge of SpecAir Specialty Gases and its advisors and is given in good faith, but we cannot guarantee its accuracy, reliability or completeness and therefore disclaim any liability for loss or damage arising out of use of this data. Since conditions of use are outside the control of the Company and its advisors we disclaim any liability for loss or damage when the product is used for other purposes than it is intended.

