



**MATERIAL SAFETY DATA SHEET**

**PRODUCT NAME: BREATHING AIR**

**1. Product and Company Identification**

**BOC Gases,  
Division of,  
The BOC Group, Inc  
575 Mountain Avenue  
Murray Hill, NJ 07974**

**BOC Gases  
Division of  
BOC Canada Limited  
5975 Falbourne Street, Unit 2  
Mississauga, Ontario L5R 3W6**

**TELEPHONE NUMBER: (908) 464-8100  
24-HOUR EMERGENCY TELEPHONE NUMBER:  
CHEMTREC (800) 424-9300**

**TELEPHONE NUMBER: (905) 501-1700  
24-HOUR EMERGENCY TELEPHONE NUMBER:  
(905) 501-0802  
EMERGENCY RESPONSE PLAN NO: 2-0101**

**PRODUCT NAME: BREATHING AIR  
CHEMICAL NAME: Oxygen in Nitrogen  
COMMON NAMES/SYNONYMS: CGA Grade D Breathing Air; CGA Grade E Breathing Air;  
Medical Air, USP  
TDG (Canada) CLASSIFICATION: 2.2  
WHMIS CLASSIFICATION: A**

**PREPARED BY: Loss Control (908)464-8100/(905)501-1700  
PREPARATION DATE: 6/1/95  
REVIEW DATES: 06/18/04**

**2. Composition, Information on Ingredients**

**EXPOSURE LIMITS<sup>1</sup>:**

<b>INGREDIENT</b>	<b>% VOLUME</b>	<b>PEL-OSHA<sup>2</sup></b>	<b>TLV-ACGIH<sup>3</sup></b>	<b>LD<sub>50</sub> or LC<sub>50</sub> Route/Species</b>
Oxygen FORMULA: O <sub>2</sub> CAS: 7782-44-7 RTECS #: RS2060000	19.5 to 23.5	None Established	Not Available	Not Available
Nitrogen FORMULA: N <sub>2</sub> CAS: 7727-37-9 RTECS #: QW9700000	76.5 to 80.5	None Established	Simple Asphyxiant	Not Available

<sup>1</sup> Refer to individual state or provincial regulations, as applicable, for limits which may be more stringent than those listed here.

<sup>2</sup> As stated in 29 CFR 1910, Subpart Z (revised July 1, 1993)

<sup>3</sup> As stated in the ACGIH 2004 Threshold Limit Values for Chemical Substances and Physical Agents.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

**3. Hazards Identification**

**EMERGENCY OVERVIEW**

Odorless, colorless, nonflammable gas. This product contains sufficient oxygen to support combustion. Contents under pressure. Use and store below 125 °F.

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**ROUTE OF ENTRY:**

Skin Contact No	Skin Absorption No	Eye Contact No	Inhalation No	Ingestion No
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**HEALTH EFFECTS:**

Exposure Limits No	Irritant No	Sensitization No
Teratogen No	Reproductive Hazard No	Mutagen No
Synergistic Effects None reported		

Carcinogenicity: -- NTP: No IARC: No OSHA: No

**EYE EFFECTS:**

None known for gas. Contact with rapidly expanding gas near the point of release may cause frostbite.

**SKIN EFFECTS:**

None known for gas. 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:**

None known. Ingestion is unlikely as product is gas at room temperature.

**ACUTE INHALATION EFFECTS:**

None expected. This product contains oxygen in the normal breathing range (19.5 to 23.5%).

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** None known.

**POTENTIAL ENVIRONMENTAL EFFECTS:** Not expected to be toxic to fish and wildlife.

## 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:**

None required.

**INHALATION:**

None required for use at normal atmospheric pressures. Facilities or practices at which air is breathed in a high pressure environment should be prepared to deal with the illnesses associated with decompression (bends or caissons disease). Decompression equipment may be required.

## 5. Fire Fighting Measures

Conditions of Flammability: Nonflammable		
Flash point: None	Method: Not Applicable	Autoignition Temperature: None
LEL(%): None		UEL(%): None
Hazardous combustion products: None		
Sensitivity to mechanical shock: None		
Sensitivity to static discharge: None		

### **FIRE AND EXPLOSION HAZARDS:**

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

### **EXTINGUISHING MEDIA:**

None required. Use as appropriate for surrounding materials.

### **FIRE FIGHTING INSTRUCTIONS:**

Firefighters should wear respiratory protection (SCBA) and full turnout or Bunker Gear. Continue to cool fire-exposed containers until well after flames are extinguished.

## 6. Accidental Release Measures

No hazard expected. Contact the appropriate emergency telephone number listed in Section 1 or call your closest BOC location if safety problems arise.

## 7. Handling and Storage

**Electrical classification:** Non-hazardous.

This gas mixture is noncorrosive and may be used with all common structural materials.

Use only in well-ventilated areas. Valve protection caps must remain in place unless container is secured with valve protection outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure 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 back flow into the cylinder. Do not insert any object (i.e.: screwdriver) into valve cap openings as this can damage the valve causing leakage.

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area of non-combustible construction away from heavily trafficked 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. Use a "first in-first out" inventory system to prevent full cylinders being stored for excessive periods of time.

For additional recommendations, consult Compressed Gas Association Pamphlet P-1, G-7, and G-7.1.

Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid form 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.

### SKIN PROTECTION:

Protective gloves appropriate for the job.

### RESPIRATORY PROTECTION:

None normally required. Use as appropriate for the job.

### OTHER/GENERAL PROTECTION:

Safety shoes, eyewash station

## 9. Physical and Chemical Properties

PARAMETER	VALUE	UNITS
Physical state (gas, liquid, solid)	: Gas	
Vapor pressure	: Above critical temp.	
Vapor density at STP (Air = 1)	: 1.0	
Evaporation point	: Not Available	
Boiling point	: -317.8	°F
	: -194.3	°C
Freezing point	: Not Available	
	: Not Available	
pH	: Not Applicable	
Specific gravity	: Not Available	
Oil/water partition coefficient	: Not Available	
Solubility (H <sub>2</sub> O)	: Slightly soluble	
Odor threshold	: Not Applicable	
Odor and appearance	: Colorless, odorless gas	

## 10. Stability and Reactivity

### STABILITY:

Stable

### INCOMPATIBLE MATERIALS:

None

### HAZARDOUS POLYMERIZATION:

Does not occur

## 11. Toxicological Information

Product is non-toxic.

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## 12. Ecological Information

Product does not contain Class I or Class II ozone depleting substances. Not toxic. Will not bioconcentrate.

## 13. Disposal Considerations

Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container PROPERLY LABELED, WITH ANY VALVE OUTLET PLUGS OR CAPS SECURED AND VALVE PROTECTION CAP IN PLACE to BOC Gases or authorized distributor for proper disposal.

## 14. Transport Information

PARAMETER	United States DOT	Canada TDG
PROPER SHIPPING NAME:	Air, Compressed	Air, Compressed
HAZARD CLASS:	2.2	2.2
IDENTIFICATION NUMBER:	UN 1002	UN 1002
SHIPPING LABEL:	NONFLAMMABLE GAS	NONFLAMMABLE GAS

## 15. Regulatory Information

### SARA TITLE III NOTIFICATIONS AND INFORMATION

#### SARA TITLE III - HAZARD CLASSES:

Sudden Release of Pressure Hazard

#### SARA TITLE III – SECTION 313 SUPPLIER NOTIFICATION:

This product does not contain toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372.

**U.S. TSCA/Canadian DSL:** All ingredients are listed on the U.S. Toxic Substances Control Act (TSCA) inventory or exempt from listing and on the Canadian Domestic Substance List (DSL).

**California Proposition 65:** This product does not contain ingredient(s) known to the State of California to cause cancer or reproductive toxicity.

**Canadian Controlled Products Regulations (CPR):** This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

## 16. Other Information

### NFPA HAZARD CODES

Health: 0  
Flammability: 0  
Instability: 0

### HMIS HAZARD CODES

Health: 0  
Flammability: 0  
Physical Hazard: 3

### RATINGS SYSTEM

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

Note: Ratings were assigned in accordance with Compressed Gas Association (CGA) guidelines as published in CGA Pamphlet P-19-2004, *CGA Recommended Hazard Ratings for Compressed Gases, 2<sup>nd</sup> Edition*.

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ACGIH	American Conference of Governmental Industrial Hygienists
DOT	Department of Transportation
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
SARA	Superfund Amendments and Reauthorization Act
STEL	Short Term Exposure Limit
TDG	Transportation of Dangerous Goods
TLV	Threshold Limit Value
WHMIS	Workplace Hazardous Materials Information System

Compressed gas cylinders shall not be refilled without the express written permission of the owner. Shipment of a compressed gas cylinder which has not been filled by the owner or with his/her (written) consent is a violation of transportation regulations.

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