

# Praxair Material Safety Data Sheet

## 1. Chemical Product and Company Identification

<b>Product Name:</b> Compressed Air	<b>Trade Name:</b> Compressed Air
<b>Product Use:</b> Many.	
<b>Chemical Name:</b> Air, compressed	<b>Synonym:</b> Compressed air, synthetic air, reconstituted air, medical air, air USP
<b>Chemical Formula:</b> Mixture of N <sub>2</sub> and O <sub>2</sub>	<b>Chemical Family:</b> Not applicable.
<b>Telephone:</b> <b>Emergencies:</b> * 1-800-363-0042	<b>Supplier /Manufacture:</b> Praxair Canada Inc. 1 City Centre Drive Suite 1200 Mississauga, ON L5B 1M2  <b>Phone:</b> 905-803-1600 <b>Fax:</b> 905-803-1682

*\*Call emergency numbers 24 hours a day only for spills, leaks, fire, exposure, or accidents involving this product. For routine information, contact your supplier or Praxair sales representative.*

## 2. Hazards Identification

### Emergency Overview

**CAUTION!** High pressure gas.

**ROUTES OF EXPOSURE:** Not available.

#### EFFECTS OF A SINGLE (ACUTE) OVEREXPOSURE:

**INHALATION:** No harm expected.

**SKIN CONTACT:** No harm expected.

**SKIN ABSORPTION:** No harm expected.

**SWALLOWING:** This product is a gas at normal temperature and pressure. No harm expected.

**EYE CONTACT:** No harm expected.

#### EFFECTS OF REPEATED (CHRONIC) OVEREXPOSURE:

None expected

#### OTHER EFFECTS OF OVEREXPOSURE:

No harm expected.

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** No harm expected

**SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION:**

None expected.

**CARCINOGENICITY:**

Not listed as carcinogen by OSHA, NTP or IARC.

**3. Composition and Information on Ingredients****COMPONENTS****CAS  
NUMBER****CONCENTRATION  
% by Mole**

Air

132259-10-0

100

**4. First Aid Measures****INHALATION:**

None expected.

**SKIN CONTACT:**

None expected.

**SWALLOWING:**

None expected.

**EYE CONTACT:**

None expected.

**NOTES TO PHYSICIAN:**

None.

**5. Fire Fighting Measures****FLAMMABLE :** No.**IF YES, UNDER WHAT CONDITIONS?**

Not applicable.

**EXTINGUISHING MEDIA:**

Oxidizing agent. May accelerate combustion. This mixture cannot catch fire. Use media appropriate for surrounding fire.

**PRODUCTS OF COMBUSTION:**

None.

**PROTECTION OF FIREFIGHTERS:****CAUTION! High-pressure gas.** Evacuate all personnel from danger area. Immediately deluge cylinders with water from maximum distance until cool; then move them away from fire area if without risk. Shut off leak if without risk.**SPECIFIC PHYSICAL AND CHEMICAL HAZARDS:**

Oxidizing agent, may accelerate combustion. Contact with flammable materials may cause fire or explosion. Container may rupture due to heat of fire. Vapours are extremely irritating. Contact may cause burns to skin and eyes. No part of a container should be subjected to a temperature higher than 52 C. See incompatibility in Section X. Most containers are provided with a pressure relief device designed to vent contents when they are exposed to elevated temperature.

**SENSITIVITY TO IMPACT:**

Avoid impact against container.

**SENSITIVITY TO STATIC DISCHARGE:**

Not applicable.

**PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS:**

Firefighters should wear self-contained breathing apparatus and full fire-fighting turnout gear.

**FLAMMABLE LIMITS IN AIR, % by volume:****LOWER:** Not applicable.**UPPER:** Not applicable.**FLASH POINT:** Not applicable.**AUTOIGNITION TEMPERATURE:** Not applicable.

## 6. Accidental Release Measures

**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:****Personal Precautions:****CAUTION!** Shut off cylinder if without risk.**Environmental Precautions:**

Prevent waste from contaminating the surrounding environment. Keep personnel away. Discard any product, residue, disposable container, or liner in an environmentally acceptable manner, in full compliance with federal, provincial, and local regulations. If necessary, call your local supplier for assistance.

## 7. Handling and Storage

**PRECAUTIONS TO BE TAKEN IN HANDLING:**

Protect cylinders from damage. Use a suitable hand truck to move cylinders; do not drag, roll, slide, or drop. Electrical equipment must be non-sparking or explosion-proof. Leak check system with soapy water; never use a flame. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Open valve slowly. If valve is hard to open, discontinue use and contact your supplier. For other precautions, see section 16.

For additional information on storage and handling, refer to Compressed Gas Association (CGA) pamphlet P-1, *Safe Handling of Compressed Gases in Containers*, available from the CGA. Refer to section 16 for the address and phone number along with a list of other available publications.

**PRECAUTIONS TO BE TAKEN IN STORAGE:**

Store and use with adequate ventilation. Separate flammable cylinders from oxygen, chlorine, and other oxidizers by at least 6 m or use a barricade of non-combustible material. This barricade should be at least 1.5 m high and have a fire resistance rating of at least ½ hour. Firmly secure cylinders upright to keep them from falling or being knocked over. Screw valve protection cap firmly in place by hand. Post "No Smoking or Open Flames" signs in storage and use areas. There must be no sources of ignition. All electrical equipment in storage areas must be explosion-proof. Storage areas must meet national electric codes for Class 1 hazardous areas. Store only where temperature will not exceed 52 C. Store full and empty cylinders separately. Use a first-in, first-out inventory system to prevent storing full cylinders for long periods.

**OTHER HAZARDOUS CONDITIONS OF HANDLING, STORAGE, AND USE:**

**High pressure gas.** Use piping and equipment adequately designed to withstand pressures to be encountered. **May accelerate combustion.** Keep oil and grease away. **Never work on pressurized system.** If there is a leak, close the cylinder valve. Vent the system down in a safe and environmentally sound manner in compliance with all federal, provincial, and local laws; then repair the leak. **Never place a compressed gas cylinder where it may become part of an electrical circuit.** When using compressed gases in and around electric welding applications, never ground the cylinders. Grounding exposes the cylinders to damage by the electric welding arc.

**Use in welding and cutting.** Read and understand the manufacturer's instructions and the precautionary label on the product. Ask your welding products supplier for a copy of Praxair's free safety booklet, P-2035, *Precautions and Safe Practices for Gas Welding, Cutting, and Heating*, and for other manufacturers' safety publications. For detailed

treatment, get ANSI Z49.1, *Safety in Welding, Cutting, and Allied Processes*, published by the American Welding Society, or see OSHA's web site at <http://www.osha-slc.gov/SLTC/weldingcuttingbrazing/>.

**Arcs and sparks can ignite combustible materials.** Prevent fires. For more information, get NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hotwork*, published by the National Fire Protection Association. **Do not strike an arc on the cylinder.** The defect produced by an arc burn could lead to cylinder rupture.

**Use in Underwater Breathing.** Suitability of this product for use in underwater breathing must be determined by or under supervision of someone experienced in the use of underwater breathing gas mixtures. This person must be familiar with *how* the product is used; the frequency, duration, and effects of use; the hazards and side effects of use, and the precautions to take to avoid or control them.

## RECOMMENDED PUBLICATIONS:

Additional information on storage, handling, and use of this product is provided in **NFPA 55: *Standard for the Storage, Use, and Handling of Compressed and Liquefied Gases in Portable Cylinders***, published by the National Fire Protection Association.

See also Praxair publication P-14-153, *Guidelines for Handling Gas Cylinders and Containers*. Obtain from your local supplier.

## 8. Exposure Controls/Personal Protection

INGREDIENTS	CAS NUMBER	LD <sub>50</sub> (Species & Routes)	LC <sub>50</sub> (Rat, 4 hrs.)	Exposure Limits
Air	132259-10-0	Not applicable.	Not applicable.	None established.

## IMMEDIATELY DANGEROUS TO LIFE AND HEALTH (IDLH):

## VENTILATION/ENGINEERING CONTROLS:

**LOCAL EXHAUST:** No special containment is required.

**MECHANICAL (General):** No special containment is required.

**SPECIAL:** None.

**OTHER:** None.

## PERSONAL PROTECTION:

**RESPIRATORY PROTECTION:** None required.

**SKIN PROTECTION:** Wear work gloves when handling cylinders.

**EYE PROTECTION:** Wear safety glasses when handling cylinders.

Select in accordance with the current CSA standard Z94.3, "Industrial Eye and Face Protection", and any provincial regulations, local bylaws or guidelines.

**OTHER PROTECTIVE EQUIPMENT:** Metatarsal shoes for cylinder handling. Protective clothing where needed. Cuffless trousers should be worn outside the shoes. Select in accordance with the current CSA standard Z195, "Protective Foot Wear", and any provincial regulations, local bylaws or guidelines.

## 9. Physical and Chemical Properties

<b>PHYSICAL STATE:</b> Gas. (Compressed Gas.)	<b>FREEZING POINT:</b> -216.2°C (-357.2°F)	<b>pH:</b>	Not applicable.
<b>BOILING POINT</b> -194.3°C (-317.7°F)	<b>VAPOUR PRESSURE</b> Not applicable.	<b>MOLECULAR WEIGHT:</b>	28.975 g/mole
<b>SPECIFIC GRAVITY: LIQUID ( Water = 1)</b> Not applicable.	<b>SOLUBILITY IN WATER,</b> Not applicable.		
<b>SPECIFIC GRAVITY: VAPOUR (air = 1)</b> 1.00 g/ml	<b>EVAPORATION RATE (Butyl Acetate=1):</b> Not applicable.	<b>COEFFICIENT OF WATER/OIL DISTRIBUTION:</b>	Not applicable.
<b>VAPOUR DENSITY:</b> 0.0012 g/ml	<b>% VOLATILES BY VOLUME:</b> 100% (v/v).	<b>ODOUR THRESHOLD:</b>	Odourless.
<b>APPEARANCE &amp; ODOUR:</b> Colourless.		Odourless gas	

## 10. Stability and Reactivity

<b>STABILITY:</b>	The product is stable.
<b>CONDITIONS OF CHEMICAL INSTABILITY:</b>	Not available.
<b>INCOMPATIBILITY (materials to avoid):</b>	Flammable and combustible materials.
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	None.
<b>HAZARDOUS POLYMERIZATION:</b>	Will not occur.
<b>CONDITIONS TO AVOID:</b>	None known.
<b>CONDITIONS OF REACTIVITY:</b>	None known.

## 11. Toxicological Information

**ACUTE DOSE EFFECTS:** Not applicable. The welding process may generate hazardous fumes and gases. (See section 16).

**STUDY RESULTS:**

None known.

## 12. Ecological Information

No adverse ecological effects expected. This product does not contain any Class I or Class II ozone-depleting chemicals. The components of this mixture are not listed as marine pollutants by TDG Regulations.

## 13. Disposal Considerations

**WASTE DISPOSAL METHOD:** Do not attempt to dispose of residual or unused quantities. Return cylinder to supplier.

## 14. Transport Information

**TDG/IMO SHIPPING NAME:** Air, compressed

<b>HAZARD CLASS:</b>	CLASS 2.2: Non-flammable, and non-toxic gas.	<b>IDENTIFICATION #:</b>	UN1002	<b>PRODUCT REPORTABLE QUANTITY (PRQ):</b>	Any accidental release in a quantity that could pose a danger to public safety or any sustained release of 10 minutes or more.
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**SHIPPING LABEL(s):** Non-flammable, non-toxic gas

**PLACARD (When Required):** Non-flammable, non-toxic gas

### SPECIAL SHIPPING INFORMATION

Cylinders should be transported in a secure position, in a well-ventilated vehicle. Cylinders transported in an enclosed, non-ventilated compartment of a vehicle can present serious safety hazards.

## 15. Regulatory Information

The following selected regulatory requirements may apply to this product. Not all such requirements are identified. Users of this product are solely responsible for compliance with all applicable federal, provincial, and local regulations. 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.

**WHMIS (Canada):** CLASS A: Compressed gas.

This product is on the DSL list.

#### International Regulations:

**EINECS:** Not available.

**DSCL (EEC):** This product is not classified according to the EU regulations.

**International Lists:** No products were found.

## 16. Other Information

#### MIXTURES:

When two or more gases, or liquefied gases are mixed, their hazardous properties may combine to create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an Industrial Hygienist, or other trained person when you make your safety evaluation of the end product. Remember, gases and liquids have properties which can cause serious injury or death.

#### HAZARD RATING SYSTEM:

##### HMIS RATINGS:

HEALTH 0

FLAMMABILITY 0

PHYSICAL HAZARD 2

#### STANDARD VALVE CONNECTIONS FOR U.S. AND CANADA:

**THREADED:** CGA-346 (Medical), CGA-590 (Industrial)

**PIN-INDEXED YOKE:** CGA-950 (Medical)

**ULTRA-HIGH-INTEGRITY CONNECTION:** Not available.

Use the proper CGA connections. **DO NOT USE ADAPTERS.** Additional limited-standard connections may apply. See CGA pamphlets V-1 and V-7 listed below.

Ask your supplier about free Praxair safety literature as referred to in this MSDS and on the label for this product. Further information about this product can be found in the following pamphlets published by the Compressed Gas Association, Inc. (CGA), 4221 Walney Road, 5th Floor, Chantilly, VA 20151-2923, Telephone (703) 788-2700, Fax (703) 961-1831, website: [www.cganet.com](http://www.cganet.com).

- AV-1 Safe Handling and Storage of Compressed Gas
- G-7.1 Commodity Specification for Air
- P-1 Safe Handling of Compressed Gases in Containers
- V-1 Compressed Gas Cylinder Valve Inlet and Outlet Connections
- V-7 Standard Method of Determining Cylinder Valve Outlet Connections for Industrial Gas Mixtures
- Handbook of Compressed Gases, Fifth Edition

Praxair asks users of this product to study this MSDS and become aware of product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this MSDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.

#### PREPARATION INFORMATION:

**DATE:** October 15, 2013  
**DEPARTMENT:** Safety and Environmental Services  
**TELEPHONE:** 905-803-1600

The opinions expressed herein are those of qualified experts within Praxair Canada Inc. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Praxair Canada Inc., it is the user's obligation to determine the conditions of safe use of the product.

Praxair Canada Inc. requests the users of this product to study this Material Data Sheet (MSDS) and become aware of product hazards and safety information. To promote safe use of this product, a user should (1) notify its employees, agents and contractors of the information on this MSDS and any product hazards and safety information, (2) furnish this same information to each of its customers for the product, and (3) request such customers to notify their employees and customers for the product of the same product hazards and safety information.

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Praxair Canada Inc.  
1 City Centre Drive  
Suite 1200  
Mississauga, ON L5B 1M2