Material Safety Data Sheet

Air (Compressed)

AIR LIQUIDE

Section 1. Chemical product and company identification

Commercial name(s). : **Air, compressed**
Material uses : Various.
Supplier/Manufacturer : Air Liquide Canada Inc. 1250, René-Lévesque West, Suite 1700, Montreal, QC H3B 5E6
In case of emergency : (514) 878-1667

Section 2. Hazards identification

Physical state : Gas.
Emergency overview : CAUTION!

HIGH PRESSURE GAS.

Keep away from heat (<52°C/125°F). Extremely hazardous gas under pressure. Keep cylinder valve closed when the product is not used.

Routes of entry : Inhalation. Dermal contact. Eye contact.
Potential acute health effects
Inhalation : Decompression sickness (bends) is possible following rapid decompression.
Skin : No known significant effects or critical hazards.
Eyes : No known significant effects or critical hazards.
Ingestion : Since the product is a gas, it will probably be inhaled rather than ingested. Consider first the preventive measures in case of inhalation.
Potential chronic health effects : **CARCINOGENIC EFFECTS**: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
Medical conditions aggravated by over-exposure : None known.

See toxicological information (Section 11)

Section 3. Composition, Information on Ingredients

	CAS number	mole %
Canada		
Air(*)	132259-10-0	100

This material is classified hazardous under the WHMIS Controlled Product Regulation in Canada.
See Chapters 8, 11, 14 and 15 for details.

Section 4. First aid measures

Not available.

Inhalation : Not applicable. Get medical attention if symptoms occur.
Skin contact : Not applicable. Get medical attention if symptoms occur.
Eye contact : Individual in contact with a gas should not wear contact lenses. Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention if symptoms occur.
Ingestion : Since the product is a gas, it will probably be inhaled rather than ingested. Consider first the preventive measures in case of inhalation.
Notes to physician : No special remark under normal condition of use. In case of inhalation under high pressure environments, the medical doctor must be warned that the person may suffer from symptoms similar to hyperoxia.

Section 5. Fire-fighting measures

Flammability of the product : Non-flammable.
May accelerate combustion.

Products of combustion : Decomposition products may include the following materials:
nitrogen oxides

Explosion hazards in the presence of various substances : Container explosion may occur under fire conditions or when heated.

Fire-fighting media and instructions : Use an extinguishing agent suitable for the surrounding fire.

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions : EVACUATE ALL PERSONNEL FROM THE IMMEDIATE AREA OF THE ACCIDENT. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. If leak is on cylinder or cylinder' valve, contact the closest Air Liquide location.

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up : Immediately contact emergency personnel. Stop leak if without risk. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and storage

Handling : Valve protection caps must remain in place unless cylinder is secured with valve outlet piped to usage 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 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 to the cylinder. Do not tamper with (valve) safety device. Close valve after each use and when empty.

Storage : 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 52°C/125°F. Cylinders must 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 being stored for excessive periods of time. Post "No Smoking or Open Flames" signs in the storage or use area. There should be no source of ignition in the storage or use area.

Section 8. Exposure controls/personal protection

Engineering controls : No special ventilation requirements.

Personal protection

Respiratory : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Wear suitable gloves for the application.

Eyes : Safety glasses with side shields.

Skin/Body : Wear appropriate personal protective suit.
Metal cap, safety shoes are recommended when handling cylinders.

Some applications of this product may require additionnal or other specific protective clothings. Please consult your supervisor.

Personal protection in case of a major leak : Safety glasses, goggles or face shield. Impervious gloves. Full suit. Metal cap, safety boots. Wear MSHA/NIOSH-approved self-contained breathing apparatus or equivalent and full protective gear.

Exposure limits : Not applicable.

Occupational exposure limits
No exposure limit value known.

In Canadian provinces where no value is specifically suggested, the lowest value above should be used. Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Physical state : Gas.

Color : Colorless.

Odor : Odorless.

Boiling/condensation point : -194.4°C (-317.9°F)

Vapor density : 1 [Air = 1]

Section 10. Stability and reactivity

Stability and reactivity : The product is stable.

Incompatibility with various substances : Reactive or incompatible with the following materials: organic materials.

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

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Acute toxicity

Acute Effects

Inhalation : Decompression sickness (bends) is possible following rapid decompression.

Skin : No known significant effects or critical hazards.

Eyes : No known significant effects or critical hazards.

Ingestion : Since the product is a gas, it will probably be inhaled rather than ingested. Consider first the preventive measures in case of inhalation.

Potential chronic health effects : **CARCINOGENIC EFFECTS**: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.

Section 12. Ecological information

Aquatic ecotoxicity

Products of degradation : These gases are released as is in the atmosphere.

Section 13. Disposal considerations

Disposal : Do not attempt to dispose of the container or of its content. Return in the shipping container properly labeled, with any valve outlet plugs or caps secured and valve protection cap in place to Air Liquide for proper disposal. For emergency disposal, contact the closest Air Liquide location.

Section 14. Transport information

NAERG : 122

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label
TDG Classification	UN1002	AIR, COMPRESSED	2.2	-	
IMDG Class	UN1002	AIR, COMPRESSED	2.2	-	
IATA-DGR Class	UN1002	AIR, COMPRESSED	2.2	-	

PG* : Packing group

Additional information

Cylinders should be transported in a secure position, in a well ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards and should be discouraged.

UN

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TDG

Explosive Limit and Limited Quantity Index
0.125

Passenger Carrying Road or Rail Index
75

IMDG

Emergency schedules (EmS)
F-C, S-V

IATA

Passenger and Cargo Aircraft Quantity limitation: 75 kg
Packaging instructions: 200
Cargo Aircraft Only Quantity limitation: 150 kg
Packaging instructions: 200
Limited Quantities - Passenger Aircraft
Quantity limitation: Forbidden
Packaging instructions: Forbidden

Section 15. Regulatory information

Canada

WHMIS (Canada) : Class A: Compressed gas.

Canadian lists : **CEPA Toxic substances**: None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: None of the components are listed.
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

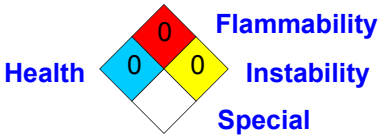
Canada inventory (DSL/NDSL) : All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.) :

Health	0
Fire hazard	0
Physical Hazard	0
Personal protection	G

National Fire Protection Association (U.S.A.) :



References : ANSI Z400.1, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. - Canada Gazette Part II, Vol. 122, No. 2. Registration SOR/88-64, 31 December 1987. Hazardous Products Act "Ingredient Disclosure List" - Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2005. CGA C-7 Guide to the Preparation of Precautionary Labels and Marking of Compressed Gas Containers. CGA P-20 Standard for Classification of Toxic Gas Mixtures. CGA P-23 Standard for Categorizing Gas Mixtures Containing Flammable and Nonflammable Components.

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Notes : (*)
1) Atmospheric air that is compressed, is composed of the following gases:
Nitrogen: 78%
Oxygen: 21%
Argon: 0.9%

2) Compressed air is also synthetically produced by mixing 79% of nitrogen with 21% of oxygen.