



Product Name: Nitrogen

MSDS No.: MSDS001

Date: 28 September 2010

My Gas Material Safety Data Sheet

1. Chemical Product and Company Identification

Product Name: Nitrogen	Trade Name: Nitrogen
Product Use: Many	UN Number: 1977
Chemical Name: Nitrogen	Synonym: Dinitrogen
Chemical Formula: N ₂	Chemical Family: Inert gas
Telephone: Emergencies: * 0861 HELIUM 011 – 794 2423	Supplier /Manufacture: My Gas Phone: 011 794 2423 Fax: 086 508 3271

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

2. Hazards Identification

Emergency Overview

CAUTION! High-pressure gas. Can cause rapid suffocation. May cause dizziness and drowsiness. Self-contained breathing apparatus may be required by rescue workers.

ROUTES OF EXPOSURE: Inhalation.

EFFECTS OF A SINGLE (ACUTE) OVEREXPOSURE:

INHALATION: Asphyxiant. Effects are due to lack of oxygen. Moderate concentrations may cause headaches, drowsiness, dizziness, excitation, excess salivation, vomiting, and unconsciousness. Lack of oxygen can kill.

SKIN CONTACT: No harm expected from vapour.

SKIN ABSORPTION: No evidence of adverse effects from available information.

SWALLOWING: This product is a gas at normal temperature and pressure.

EYE CONTACT: No harm expected.



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EFFECTS OF REPEATED (CHRONIC) OVEREXPOSURE:

No evidence of adverse effects from available information.

OTHER EFFECTS OF OVEREXPOSURE:

None known.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

The toxicology and the physical and chemical properties of this product suggest that overexposure is unlikely to aggravate medical condition.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH

HAZARD EVALUATION:

None currently known.

CARCINOGENICITY:

Not listed as carcinogen.

3. Composition and Information on Ingredients

COMPONENTS: Nitrogen

UN NUMBER: 1977

CONCENTRATION: 100
% by Mole

4. First Aid Measures

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

SKIN CONTACT: None expected.

SWALLOWING: This product is a gas at normal temperature and pressure.

EYE CONTACT: Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. See a physician, preferably an ophthalmologist, immediately.

NOTES TO PHYSICIAN:

There is no specific antidote. Treatment of over-exposure should be directed at the control of symptoms and the clinical condition.



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5. Fire Fighting Measures

FLAMMABLE: No. **IF YES, UNDER WHAT CONDITIONS?** Not applicable.

EXTINGUISHING MEDIA:

This material cannot catch fire. Use media appropriate for surrounding fire.

PRODUCTS OF COMBUSTION:

None.

PROTECTION OF FIREFIGHTERS:

CAUTION! High-pressure gas. Evacuate all personnel to a safe distance. Immediately deluge containers with water spray from maximum distance until cool, then move containers away from fire area if without risk.

SPECIFIC PHYSICAL AND CHEMICAL HAZARDS:

Gas cannot catch fire. Container may rupture due to heat of fire. No part of a container should be subjected to a temperature higher than 25°C. 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.



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6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Personal Precautions:

CAUTION! High-pressure gas. Evacuate all personnel from danger area. Use self-contained breathing apparatus where needed. Shut off flow if you can do so without risk. Ventilate area or move cylinder to a well ventilated area. Test for sufficient oxygen, especially in confined spaces, before allowing reentry.

Environmental Precautions:

Slowly release into atmosphere outdoors. Keep personnel away. Discard any product, residue, disposable container, or liner in an environmentally acceptable manner, in full compliance with 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. 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 My Gas. For other precautions, see section 16.

PRECAUTIONS TO BE TAKEN IN STORAGE:

Store and use with adequate ventilation. Firmly secure cylinders upright to keep them from falling or being knocked over. Screw valve protection cap firmly in place by hand. Store only where temperature will not exceed 25°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. **Gas can cause rapid suffocation due to oxygen deficiency.** Store and use with adequate ventilation. Close valve after each use; keep closed even when empty. **Prevent reverse flow.** Reverse flow into cylinder may cause rupture. Use a check valve or other protective device in any line or piping from the cylinder. **When returning cylinder to supplier,** be sure valve is closed, then install valve outlet plug tightly. **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 local laws; then repair the leak. **Never place a compressed gas cylinder where it may become part of an electrical circuit.**



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RECOMMENDED PUBLICATIONS:

Additional information on storage, handling, and use of this product is available from the South African Compressed Gas Association (SACGA).

8. Exposure Controls/Personal Protection

INGREDIENTS	UN NUMBER	LD50 (Species & Routes)	LC50 (Rat, 4 hrs.)	Exposure Limits
Nitrogen	1977	Not applicable	Not available	Simple asphyxiant

IMMEDIATELY DANGEROUS TO LIFE AND HEALTH (IDLH):

VENTILATION/ENGINEERING CONTROLS:

LOCAL EXHAUST: Use a local exhaust system, if necessary, to maintain an adequate supply of oxygen in the worker's breathing zone.

MECHANICAL (General): Acceptable if it can maintain an adequate supply of oxygen in the worker's breathing zone.

SPECIAL: None.

OTHER: None.

PERSONAL PROTECTION:

RESPIRATORY PROTECTION: Use air supplied respirator when working in confined space or where local exhaust or ventilation does not keep exposure below a safe level. Select in accordance with the South African regulations or guidelines.

SKIN PROTECTION: Wear work gloves when handling cylinders.

EYE PROTECTION: Wear safety glasses when handling cylinders.

OTHER PROTECTIVE EQUIPMENT: Metatarsal shoes for cylinder handling. Protective clothing where needed.



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9. Physical and Chemical Properties

PHYSICAL STATE: Gas	FREEZING POINT: -209.9°C (-345.8°F)	pH: Not applicable
BOILING POINT: -195.8°C (-320.4°F)	VAPOUR PRESSURE: Not applicable	MOLECULAR WEIGHT: 28.01 g/mole
SPECIFIC GRAVITY: Not applicable LIQUID (Water = 1)	SOLUBILITY IN WATER: Negligible	
SPECIFIC GRAVITY: 0.97 g/ml @ 21.1 C VAPOUR (air = 1)	EVAPORATION RATE: Not applicable (Butyl Acetate=1):	COEFFICIENT OF WATER/OIL DISTRIBUTION: Not applicable
VAPOUR DENSITY: 0.00115 g/ml @ 21.1 C	% VOLATILES BY VOLUME: 100% (v/v)	ODOUR THRESHOLD: Odourless
APPEARANCE & ODOUR: Colourless. Odourless		

10. Stability and Reactivity

STABILITY:	The product is stable.
CONDITIONS OF CHEMICAL INSTABILITY:	Elevated temperatures
INCOMPATIBILITY (materials to avoid):	Under certain conditions, nitrogen can react violently with lithium, neodymium, titanium (above 800 °c) and magnesium to form nitrides. At high temperature it can also combine with oxygen and hydrogen.
HAZARDOUS DECOMPOSITION PRODUCTS:	None
HAZARDOUS POLYMERIZATION:	Will not occur
CONDITIONS TO AVOID:	None
CONDITIONS OF REACTIVITY:	None



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11. Toxicological Information

ACUTE DOSE EFFECTS: No specific information is available in our database regarding the other toxic effects of this material for humans.

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.

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: Nitrogen, Compressed

HAZARD CLASS: CLASS 2.2:
Non-flammable, non-corrosive and
non - poisonous gas.

IDENTIFICATION #: UN1977

PRODUCT RQ: Any accidental
release in a quantity that could
pose a danger to public safety or
any sustained release of 10
minutes or more.

SHIPPING LABEL(s): Non-flammable, non-poisonous gas

PLACARD (When Required): Non-flammable, non-poisonous 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 vehicle can present serious safety hazards.



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15. Regulatory Information

Users of this product are solely responsible for compliance with all applicable laws and local regulations.

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.

My Gas 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.