

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

A-Gas Nitrogen, High Purity

PROPER SHIPPING NAME

NITROGEN, COMPRESSED

PRODUCT USE

A wide variety of applications including the manufacture of ammonia, nitric acid, nitrates, cyanides, etc.; in manufacture of explosives.

Blanket gas to form an oxygen free, inert atmosphere for the preservation of materials, including food; metallurgy. Filling of incandescent bulbs.

SUPPLIER

Company: A- Gas (Australia) Pty Ltd

Address:

9- 11 Oxford Road

Laverton North

VIC 3026

Australia

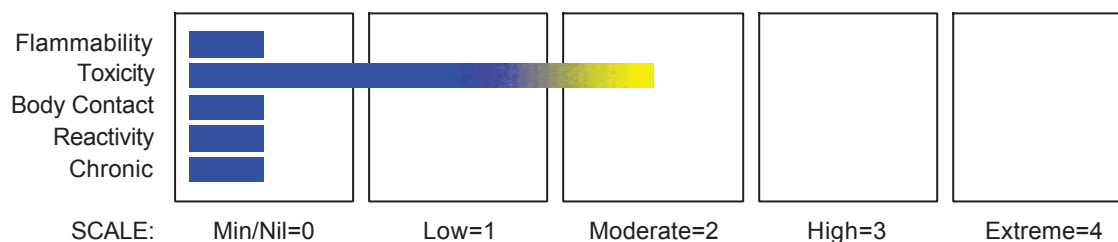
Telephone: [61] (0) 3 93689222

Emergency Tel:**TOLL: [61] 1800 024 973**

Fax: [61] (0) 3 93689233

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS



GHS Classification

Gas under Pressure (Compressed gas)

STOT - SE (Narcosis) Category 3



EMERGENCY OVERVIEW

HAZARD

WARNING

Determined by Chemwatch using GHS criteria

H280

Contains gas under pressure; may explode if heated.

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Section 2 - HAZARDS IDENTIFICATION

H336 May cause drowsiness or dizziness.
AUH044 Risk of explosion if heated under confinement

PRECAUTIONARY STATEMENTS

Prevention

Code	Phrase
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P271	Use only outdoors or in a well- ventilated area.

Response

Code	Phrase
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.

Storage

Code	Phrase
P403+P233	Store in a well- ventilated place. Keep container tightly closed.
P405	Store locked up.
P410+P403	Protect from sunlight. Store in a well- ventilated place.

Disposal

Code	Phrase
P501	Dispose of contents/container to ...

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
nitrogen	7727-37-9.	>99.999 [^]

Section 4 - FIRST AID MEASURES

SWALLOWED

- Generally not applicable.

EYE

- Generally not applicable.

SKIN

- Not normally required. In case of cold burns (frost-bite):
- Move casualty into warmth before thawing the affected part; if feet are affected carry if possible
- Bathe the affected area immediately in luke-warm water (not more than 35 deg C) for 10 to 15 minutes, immersing if possible and without rubbing
- DO NOT apply hot water or radiant heat.
- Apply a clean, dry, light dressing of "fluffed-up" dry gauze bandage.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

NOTES TO PHYSICIAN

Treat for asphyxia.

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Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- There is no restriction on the type of extinguisher which may be used.

FIRE FIGHTING

GENERAL

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus and protective gloves.
- Fight fire from a safe distance, with adequate cover.
- Use water delivered as a fine spray to control fire and cool adjacent area.

FIRE/EXPLOSION HAZARD

- Non flammable gas.
- Heating may cause expansion or decomposition leading to violent rupture of containers.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

If safe to do so, stop flow of gas.

- Remove leaking cylinders to a safe place if possible.
- Release pressure under safe, controlled conditions by opening the valve.
- DO NOT exert excessive pressure on valve; DO NOT attempt to operate damaged valve.

Cylinder leakage:-

If leak occurs in an enclosed area, evacuate. Increase ventilation, leaks in enclosed areas can build up to a hazardous level.

MAJOR SPILLS

- Clear area of all unprotected personnel and move upwind.
- Alert Emergency Authority and advise them of the location and nature of hazard.
- Wear breathing apparatus and protective gloves.
- Prevent by any means available, spillage from entering drains and water-courses.
- Remove leaking cylinders to a safe place if possible.
- Release pressure under safe, controlled conditions by opening the valve.
- DO NOT exert excessive pressure on valve; DO NOT attempt to operate damaged valve.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Consider use in closed pressurised systems, fitted with temperature, pressure and safety relief valves which are vented for safe dispersal.
- The tubing network design connecting gas cylinders to the delivery system should include appropriate pressure indicators and vacuum or suction lines.
- Fully-welded types of pressure gauges, where the bourdon tube sensing element is welded to the gauge body, are recommended.
- Before connecting gas cylinders, ensure manifold is mechanically secure and does not contain another gas. Before disconnecting gas cylinder, isolate supply line segment proximal to cylinder, remove trapped gas in supply line with aid of vacuum pump.

Requirements of State Authorities concerning conditions for tank entry must be met. Particularly with regard to training of crews for tank entry; work permits; sampling of atmosphere; provision of rescue harness and protective gear as needed.

Avoid inhalation Use in a well-ventilated area.

Local exhaust ventilation may be required for safe working, i.e. to keep exposures below required standards, otherwise PPE is required.

Wear protective clothing when risk of exposure occurs.

Avoid sources of heat Avoid physical damage to containers.

- DO NOT transfer gas from one cylinder to another.

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Section 7 - HANDLING AND STORAGE

SUITABLE CONTAINER

Cylinder fitted with valve protector cap. Ensure the use of equipment rated for cylinder pressure.

- Check that containers are clearly labelled.

STORAGE INCOMPATIBILITY

If quantity exceeds limits prescribed by appropriate Dangerous Goods Code, restrictions exist on the transport or containerised storage of the material with:

- Class 4.2 - Spontaneously combustible substances;
- Class 5.2 - Organic peroxides.

STORAGE REQUIREMENTS

- Store in original containers.
- Store in an upright position.
- DO NOT store in pits, depressions, basements or areas where vapours may be trapped.
- No smoking, naked lights, heat or ignition sources.
- Cylinders should be stored in a purpose-built compound with good ventilation, preferably in the open.
- Such compounds should be sited and built in accordance with statutory requirements.
- The storage compound should be kept clear and access restricted to authorised personnel only.
- Cylinders stored in the open should be protected against rust and extremes of weather.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

MATERIAL DATA

A-GAS NITROGEN, HIGH PURITY:

May act as a simple asphyxiants; these are gases which, when present in high concentrations, reduce the oxygen content in air below that required to support breathing, consciousness and life; loss of consciousness, with death by suffocation may rapidly occur in an oxygen deficient atmosphere.

CARE: Most simple asphyxiants are odourless or possess low odour and there is no warning on entry into an oxygen deficient atmosphere.

PERSONAL PROTECTION



RESPIRATOR

- Supplied air. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

- Safety glasses.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

HANDS/FEET

- Wear physical protective gloves, e.g. leather.
- Wear safety footwear.

OTHER

- Ensure that there is ready access to breathing apparatus.
- Operators should be trained in correct use.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

■ General exhaust is adequate under normal operating conditions.
Provide adequate ventilation in warehouse or closed storage areas.
If risk of overexposure exists, wear air supplied breathing apparatus.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Colourless, odourless compressed gas; sparingly soluble in water.
Soluble in liquid ammonia, alcohol.
Packed under pressure in pewter-coloured cylinders fitted with AS2473 Type 10 valve outlet. Sudden release of pressure or leakage may result in rapid generation of large volume of asphyxiant gas. NB; Gas gives NO warning of exposure.
Compressed nitrogen is available at different pressures. For example,
(a) normal - 13,700 kPa @ 15 deg. C; (b) high - 25,000 kPa @ 15 deg. C

PHYSICAL PROPERTIES

Gas.
Does not mix with water.

State	Compressed gas	Molecular Weight	28.02
Melting Range (°C)	- 209.9	Viscosity	Not Applicable
Boiling Range (°C)	- 195.8	Solubility in water (g/L)	Immiscible
Flash Point (°C)	Not applicable	pH (1% solution)	Not applicable.
Decomposition Temp (°C)	Not applicable	pH (as supplied)	Not applicable
Autoignition Temp (°C)	Not applicable	Vapour Pressure (kPa)	Not available
Upper Explosive Limit (%)	Not applicable	Specific Gravity (water=1)	Not available
Lower Explosive Limit (%)	Not applicable	Relative Vapour Density (air=1)	0.967
Volatile Component (%vol)	100	Evaporation Rate	Not available

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY

No data for this material.
For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

Health hazard summary table:

Acute toxicity	Not applicable
Skin corrosion/irritation	Not applicable
Serious eye damage/irritation	Not applicable
Respiratory or skin sensitization	Not applicable
Germ cell mutagenicity	Not applicable
Carcinogenicity	Not applicable
Reproductive toxicity	Not applicable
STOT- single exposure	STOT SE 3
STOT- repeated exposure	Not applicable
Aspiration hazard	Not applicable

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

■ Overexposure is unlikely in this form.

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Section 11 - TOXICOLOGICAL INFORMATION

EYE

- Overexposure is unlikely in this form.

SKIN

- Overexposure is unlikely in this form.

INHALED

- Symptoms of asphyxia (suffocation) may include headache, dizziness, shortness of breath, muscular weakness, drowsiness and ringing in the ears.

If the asphyxia is allowed to progress, there may be nausea and vomiting, further physical weakness and unconsciousness and, finally, convulsions, coma and death.

- Nitrogen is non-toxic, but may replace oxygen in inhaled air, hence causing suffocation.

As the concentration of inhaled oxygen is reduced from 21% to 14% by volume, pulse rate and volume of breathing increase.

CHRONIC HEALTH EFFECTS

- Generally not applicable.

TOXICITY AND IRRITATION

- No significant acute toxicological data identified in literature search.

Section 12 - ECOLOGICAL INFORMATION

This material and its container must be disposed of as hazardous waste.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
A- Gas Nitrogen, High Purity	No Data Available	No Data Available	No Data Available	No Data Available

Section 13 - DISPOSAL CONSIDERATIONS

No data for this material.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: NON-FLAMMABLE COMPRESSED GAS

HAZCHEM:

2T (ADG7)

ADG7:

Class or Division:	2.2	Subsidiary Risk:	None
UN No.:	1066	Packing Group:	None
Special Provision:	None	Limited Quantity:	120 ml
Portable Tanks & Bulk Containers - Instruction:	None	Portable Tanks & Bulk Containers - Special Provision:	None
Packagings & IBCs - Packing Instruction:	P200	Packagings & IBCs - Special Packing Provision:	None
Name and Description:	NITROGEN, COMPRESSED		

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Section 14 - TRANSPORTATION INFORMATION

Air Transport IATA:

ICAO/IATA Class:	2.2	ICAO/IATA Subrisk:	None
UN/ID Number:	1066	Packing Group:	-
Special provisions:	A69		
Cargo Only			
Packing Instructions:	200	Maximum Qty/Pack:	150 kg
Passenger and Cargo		Passenger and Cargo	
Packing Instructions:	200	Maximum Qty/Pack:	75 kg
Passenger and Cargo Limited Quantity		Passenger and Cargo Limited Quantity	
Packing Instructions:	Forbidden	Maximum Qty/Pack:	Forbidden

Shipping name:NITROGEN, COMPRESSED

Maritime Transport IMDG:

IMDG Class:	2.2	IMDG Subrisk:	None
UN Number:	1066	Packing Group:	None
EMS Number:	F-C,S-V	Special provisions:	None
Limited Quantities:	120 ml		

Shipping name:NITROGEN, COMPRESSED

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE None

REGULATIONS

No data for A-Gas Nitrogen, High Purity (CW: 4689-13)

Section 16 - OTHER INFORMATION

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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