



Label 2.2: Non-flammable,
Non-toxic gas

NITROGEN, REFRIGERATED LIQUID (N2) LNS101

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Trade name : NITROGEN, REFRIGERATED LIQUID (N2)
MSDS Nr : LNS101
Use : Industrial / medical applications.
Chemical formula : N2
Company identification : Liquid Nitrogen Services Pty Ltd
24 Technology Circuit
Hallam VIC 3803
Tel: +61 3 9782 2646
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admin@liquidnitrogenservices.com.au
Emergency phone no : **0419 313 713**

2. HAZARDS IDENTIFICATION

Hazard classification : Classified as a dangerous good by the criteria of the ADG code. WHS regulation – Physical hazard code H281
Hazards identification : Refrigerated liquefied gas. Contact with product may cause cold burns or frostbite.
In high concentrations may cause asphyxiation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Preparation	Substance.
Substance name	Contents CAS No EC No Annex No Classification
Nitrogen (refrigerated)	: 100 % 7727-37-9 231-783-9 -----

Contains no other components or impurities which will influence the classification of the product.

4. FIRST AID MEASURES

First aid measures

- **Inhalation** : In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation.
Remove victim to uncontaminated area wearing self contained Breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
- **Skin/eye contact** : Immediately flush eyes thoroughly with water for at least 15 minutes.
In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance.
- **Ingestion** : Ingestion is not considered a potential route of exposure.

5. FIRE-FIGHTING MEASURES

Specific hazards : Exposure to fire may cause containers to rupture/explode.
Hazardous combustion products : None.
Extinguishing media

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5. FIRE-FIGHTING MEASURES (continued)

- Suitable extinguishing media
Specific methods

: All known extinguishants can be used.
: If possible, stop flow of product.

Move away from the container and cool with water spray or fog from a protected position. Do not use water jet to extinguish. If leaking do not spray water onto container. Water surrounding area (from protected position) to contain fire.

Advice for Fire-fighters

: Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems. Exposure to fire may cause containers to rupture/explode. If possible, stop flow of product. Use water spray or fog to knock down fire fumes if possible. Move containers away from the fire area if this can be done without risk.

Special protective equipment for fire Fighters

: In confined space use self-contained breathing apparatus. Standard protective clothing and equipment for fire fighters.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

: Evacuate area.
Use protective clothing.
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
Ensure adequate air ventilation.

Environmental precautions

: Try to stop release.
Prevent from entering sewers, basements and work pits, or any place where its accumulation can be dangerous.

Clean up methods

: Ventilate area.

7. HANDLING AND STORAGE

Precautions for safe handling

: Suck back of water into the container must be prevented. Do not allow backfeed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature.
: Only experienced and properly instructed persons should handle gases under pressure. Ensure the complete gas system is regularly checked for leaks. Do not smoke while handling product. Do not breathe gas. Avoid release of product into atmosphere. Never attempt to repair or modify container valves or safety relief Devices. Damaged valves should be reported immediately to the supplier. Keep container valve outlets clean and free from contaminants particularly oil and water. Never use direct flame or electrical heating devices to raise the Pressure of a container. Refer to supplier's container handling instructions and contact your gas supplier if in doubt.

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7. HANDLING AND STORAGE (continued)

Conditions for safe storage : Observe all regulations and local requirements regarding storage of containers.
Keep container below 50°C in a well ventilated place
Containers should not be stored in conditions likely to encourage Corrosion.
Containers should be stored in the vertical position and properly secured to prevent them from falling over.
Store containers in location free from fire risk and away from sources of heat and ignition.
Keep away from combustible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protection : Ensure adequate ventilation.
Protect eyes, face and skin from liquid splashes.
Wear safety glasses with side shields, wear working gloves and safety shoes when handling containers.

Exposure Controls : Provide adequate general and local exhaust ventilation.
Systems under pressure should be regularly checked for leakages.
Oxygen detectors should be used when asphyxiating gases may be released.
A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state at 20 °C : Gas.
Colour : Colourless liquid.
Odour : No odour warning properties.
Molecular weight : 28
Melting point [°C] : -210
Boiling point [°C] : -196
Critical temperature [°C] : -147
Vapour pressure [20°C] : Not applicable.
Relative density, gas (air=1) : 0.97
Relative density, liquid (water=1) : 0.8
Solubility in water [mg/l] : 20
Other data : Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

10. STABILITY AND REACTIVITY

Hazardous decomposition products : None.
Stability : Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Toxicity information : No known toxicological effects from this product.

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12. ECOLOGICAL INFORMATION

Ecological effects information : Can cause frost damage to vegetation.

13. DISPOSAL CONSIDERATIONS

General : Do not discharge into any place where its accumulation could be dangerous.
Contact supplier if guidance is required.

14. TRANSPORT INFORMATION

UN No. : 1977
• Labelling ADG, IMDG, IATA



: Label 2.2: Non-flammable, non-toxic gas.

Land transport

Hazard Identification number : 22
Proper shipping name : NITROGEN, REFRIGERATED LIQUID
HAZCHEM - Emergency Action Code : HAZCHEM
: HAZCHEM_C
- **HAZCHEM code** : 2T
- **ADG Class** : 2
- **Packing Instruction(s) – General** : P203

Sea transport

- **IMO-IMDG code**
• **Proper shipping name** : NITROGEN, REFRIGERATED LIQUID
• **Class** : 2.2
- **IMO Packing group** : P203
- **Emergency Schedule (EmS) - Fire** : F-C
- **Emergency Schedule (EmS) - Spillage** : S-V
- **Instructions - Packing** : P203

Air transport

- **ICAO/IATA**
- **Proper shipping name** : NITROGEN, REFRIGERATED LIQUID
• **Class** : 2.2
• **Passenger and Cargo Aircraft** : Allowed.
- **Packing instruction** : 202
• **Cargo Aircraft only** : Allowed.

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14. TRANSPORT INFORMATION (continued)

- Packing instruction : 202
Other transport information : Avoid transport on vehicles where the load space is not separated from the driver's compartment.
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.
Before transporting product containers:
- Ensure that containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
- Ensure there is adequate ventilation.
- Compliance with applicable regulations.

15. REGULATORY INFORMATION

- EC Classification : Ensure all national/local regulations are observed.
: Not included in Annex I.
EC Labelling : Not classified as dangerous preparation/substance.
Symbol(s) : No EC labelling required.
R Phrase(s) : None.
S Phrase(s) : None.

16. OTHER INFORMATION

- May cause frostbite.
Keep container in a well-ventilated place.
Do not breathe the gas.
Asphyxiation in high concentrations.
The hazard of asphyxiation is often overlooked and must be stressed during operator training.
This Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws.
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