



# MATERIAL SAFETY DATA SHEET



ISO 9001 : 2000 Cert.No. : 622578

## NITROGEN

### 1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product name	Nitrogen, compressed
Chemical name/formula	Nitrogen / N <sub>2</sub>
Company identification	See header and footer
Emergency phone no.	See footer

### 2 COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Preparation	Substance
Components Impurities	Contains no other components or impurities, which will influence the classification of the product.
CAS No.	7727-37-9

### 3 HAZARDS IDENTIFICATION

General	<ul style="list-style-type: none"><li>▶ Non-flammable compressed gas.</li><li>▶ In high concentrations may cause asphyxiation.</li></ul>
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### 4 FIRST-AID MEASURES

Inhalation	<ul style="list-style-type: none"><li>▶ In high concentrations may cause asphyxiation. Symptoms may include loss of mobility or consciousness. Victim may not be aware of asphyxiation.</li><li>▶ Remove victim to uncontaminated area wearing self-contained breathing apparatus. Keep victim warm and rested.</li><li>▶ Call a doctor. Apply artificial respiration if breathing stopped.</li></ul>
Skin/Eye contact	<ul style="list-style-type: none"><li>▶ No adverse effects anticipated.</li></ul>
Ingestion	<ul style="list-style-type: none"><li>▶ Ingestion is not considered a potential route of exposure.</li></ul>

### 5 FIRE-FIGHTING MEASURES

Specific hazards	<ul style="list-style-type: none"><li>▶ Exposure to fire may cause containers to rupture or explode.</li></ul>
Hazardous combustion products	<ul style="list-style-type: none"><li>▶ None</li></ul>
Suitable extinguishing media	<ul style="list-style-type: none"><li>▶ All known extinguishants can be used.</li></ul>
Specific methods	<ul style="list-style-type: none"><li>▶ If possible, stop flow of product.</li><li>▶ Move container away or cool with water from a protected position.</li></ul>
Special protective Equipment (for fire fighters)	<ul style="list-style-type: none"><li>▶ In confined space, use a self-contained breathing apparatus.</li></ul>

### 6 ACCIDENTAL RELEASE MEASURES

Personal precautions	<ul style="list-style-type: none"><li>▶ Evacuate area.</li><li>▶ Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.</li><li>▶ Ensure adequate air ventilation.</li></ul>
Environmental precautions	<ul style="list-style-type: none"><li>▶ Try to stop release.</li></ul>
Clean up methods	<ul style="list-style-type: none"><li>▶ Ventilate area</li></ul>

### 7 HANDLING & STORAGE

General	<ul style="list-style-type: none"><li>▶ Suck back of water into the container must be prevented. Do not allow back-feed into container.</li><li>▶ Use only properly specified equipment, which is suitable for this product, its supply pressure and temperature.</li><li>▶ Keep container below 50°C in a well-ventilated place.</li><li>▶ Refer to "safe handling, transport and storage of compressed gas cylinder" or contact AIG if in doubt.</li></ul>
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### 8 EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure limit value	<ul style="list-style-type: none"><li>▶ None</li></ul>
Personal protection	<ul style="list-style-type: none"><li>▶ Ensure adequate ventilation.</li></ul>

### 9 PHYSICAL & CHEMICAL PROPERTIES

Molecular weight	28
Melting point	-210°C
Boiling point	-196°C
Critical temperature	-147°C
Relative density, gas	0.97 (air = 1)
Relative density, liquid	Not applicable
Vapour pressure @20°C	Not applicable
Solubility mg/l water	20 mg/l
Appearance/Colour	Colourless gas
Odour	No odour warning properties
Auto-ignition temperature	Not applicable
Flammability range	Not flammable

### 10 STABILITY & REACTIVITY

General	<ul style="list-style-type: none"><li>▶ Stable under normal conditions.</li></ul>
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### 11 TOXICOLOGICAL INFORMATION

General	<ul style="list-style-type: none"><li>▶ No known toxicological effects from this product.</li></ul>
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### 12 ECOLOGICAL INFORMATION

General	<ul style="list-style-type: none"><li>▶ No known ecological effects from this product.</li></ul>
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### 13 DISPOSAL CONSIDERATIONS

General	<ul style="list-style-type: none"><li>▶ Do not discharge into areas where its accumulation could be dangerous.</li><li>▶ Vent to atmosphere in a well ventilated place.</li><li>▶ Contact AIG if guidance is required.</li></ul>
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## 14 TRANSPORT INFORMATION

UN No. 1066  
Class/Division 2.2 (Non-Flammable Gas)  
Subsidiary risk None  
UN proper shipping name Nitrogen, compressed  
IMO/IATA shipping label



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 they are firmly secured and:
  - compliance with applicable regulations;
  - cylinder valve is closed and not leaking;
  - valve outlet cap nut or plug (where provided) is correctly fitted;
  - valve protection device (where provided) is correctly fitted and
  - there is adequate ventilation.

## 15 REGULATORY INFORMATION

General

- ▶ Singapore's Factories Act 2000, Sections 14, 34, 44 & 60A.
- ▶ Singapore Standards:
  - CP 12:2000 Part 1
  - CP 98:2003
  - SS 152:2003
  - SS 286:1984 Part 1 to Part 5

Risk and safety phrases

- ▶ S51 – Use only in well ventilated area.

## 16 OTHER INFORMATION

General

- ▶ Ensure all local regulations or legislations are observed.
- ▶ Asphyxiant in high concentrations. Keep container in a well-ventilated place. Do not breathe gas.
- ▶ The hazard of asphyxiation is often overlooked and must be stressed before use.
- ▶ Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.
- ▶ Details given in this document are believed to be correct at the time of revising.
- ▶ Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.
- ▶ This safety data sheet is for information purposes only and is subjected to change without notice.

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