

## MATERIAL SAFETY DATA SHEET

### **Nitrogen (Gas)**

#### PRODUCT AND COMPANY IDENTIFICATION

Product name	Nitrogen (compressed)
Chemical name	Nitrogen
Chemical formula	N <sub>2</sub>
Components	Formed from element nitrogen
Impurities	Contains no other impurities which will influence the classification of the product
Company identification	CryoExpress Singapore Pte Ltd 1 Bukit Batok Crescent #05-15 WCEGA Plaza Singapore 658064
Telephone number	(65) 6561 5282

#### Product Information / Ingredients

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

#### HAZARDS IDENTIFICATION

Hazards identification	Might cause asphyxiation if released in confined area.
Inhalation	Nitrogen is a simple asphyxiant. Symptoms of exposure include dizziness, headache, loss of consciousness, and under some circumstances, death.
Skin / Eye contact	No adverse effects anticipated.
Ingestion	Ingestion is unlikely to happen.

### FIRST AID MEASURES

Inhalation	High concentration causes asphyxiation. Symptoms include loss of mobility and consciousness. Low concentration causes increased respiration and headache. Immediately remove victim to fresh air area.
Skin/Eye contact	No adverse effects anticipated.
Ingestion	Ingestion is unlikely to happen.

### FIRE FIGHTING MEASURES

Specific hazards	Exposure to fire may cause containers to rupture or explode
Hazardous combustion products	None.
Suitable extinguishing media	All known extinguishers could be used.

### ACCIDENTAL RELEASE MEASURES

Personal precautions	Evacuate all personnel from affected area. Wear protective clothing and self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation.
Environmental precautions	Stop flow if atmosphere is proved to be unsafe. Do not enter any place (e.g. basements, workpits) where its accumulation could be dangerous.
Clean up methods	Ventilate area.

### HANDLING AND STORAGE

Handling and storage	Suck back of water into container and backfeed must be prevented. Use only properly specified equipment, supply pressure and temperature for this product. Contact supplier if in doubt.
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#### EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limit value (PEL-OSHA)	None.
Personal protection	Ensure adequate ventilation. In case of leakage, use self-contained breathing apparatus.

#### PHYSICAL AND CHEMICAL PROPERTIES

Molecular weight	28
Freezing point	-210 °C
Boiling point	-196 °C
Critical temperature	-147 °C at 3.4 MPa
Relative density, gas	0.97 (air = 1)
Relative density, liquid	0.8 (water = 1)
Vapour pressure 20 °C	Not applicable
Solubility mg/l water	20 mg/l
Odour and appearance	Colourless, odourless gas

#### STABILITY AND REACTIVITY

Stability and reactivity	Stable under normal conditions.
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#### TOXICOLOGICAL INFORMATION

General	No known toxicological effects from this product.
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#### ECOLOGICAL INFORMATION

General	No known toxicological effects from this product.
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### DISPOSAL CONSIDERATIONS

General Do not discharge into any place where its accumulation could be dangerous. Discharge to atmosphere in large quantities should be avoided. Contact supplier if guidance is required.

### TRANSPORT INFORMATION

Proper shipping name	Nitrogen
UN Nr	1066
Hazard class	2.2
Shipping label	Label 2: Non flammable gas.
Other transport information	Avoid transport on vehicles where load space is not separated from driver's compartment. Ensure vehicle driver is aware of the potential hazards and knows what to do in event of an accident or an emergency.

### REGULATORY INFORMATION

General	Singapore Factories Act 2000, Sections 14, 34, 44 & 60A. Singapore Standard: 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 a well ventilated area

### OTHER INFORMATION

Ensure all national/local regulations are observed.

Details given in this document are believed to be correct at the time of going to press. 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.

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