

MATERIAL SAFETY DATA SHEET

Nitrogen (Refrigerated Liquid)

PRODUCT AND COMPANY IDENTIFICATION

Product name	Nitrogen (refrigerated liquid)
Chemical name	Nitrogen
Chemical formula	N ₂
Company identification	CryoExpress Singapore Pte Ltd 1 Bukit Batok Crescent #05-15 WCEGA Plaza Singapore 658064
Telephone number	(65) 6561 5282

PRODUCT INFORMATION / INGREDIENTS

Components	Formed from element nitrogen
Impurities	Contains no other impurities which will influence the classification of the product
CAS Nr	7727-37-9

HAZARDS IDENTIFICATION

Hazards identification	Might cause asphyxiation.
Inhalation	Nitrogen is a simple asphyxiant. Symptoms of exposure include dizziness, headache, loss of consciousness, and under some circumstances, death.
Skin / Eye contact	Contact with rapidly expanding gases may cause frostbite.
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.
Eye contact	Flush eyes immediately and thoroughly with water. Obtain medical assistance.
Skin contact	Remove contaminated clothing and flush affected areas with water. Obtain medical assistance if irritation persists.
Ingestion	Ingestion is unlikely to happen.

FIRE FIGHTING MEASURES

Specific hazards	Non-flammable.
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 liquid

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	Could cause frost damage to vegetation.
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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, refrigerated liquid
UN Nr 1977
Hazard class 2.2
Shipping label Label 2: Non flammable liquid.
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

EC Classification Proposed by the industry. Not classified as dangerous substance.
U.S. Federal Regulations None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

OTHER INFORMATION

Ensure all national/local regulations are observed.
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