

Fine Gas Company Limited

Document Number
QCS/SDS/02

Safety Data Sheet: Liquid Nitrogen (LIN)

Revision Number
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1	Product	Liquid Nitrogen
2	Hazard Identification	Extremely cold liquid which can cause frostbite in case of direct contact. Avoid breathing gas. Can cause rapid suffocation
3	Potential Health Effects	
3.1	Breathing	In high concentrations, can cause asphyxiation. Symptoms may include loss of mobility / consciousness. Victim may not be aware of Asphyxiation.
3.2	Contact	Direct contact with liquid may cause cold burns / severe frostbite Exposure to oxygen deficient atmosphere may cause Dizziness, Salivation, Nausea, Vomiting, Loss of mobility / consciousness
4	Aggravated Medical Condition	High concentration of nitrogen can cause Asphyxiation which may bring out unconsciousness without warning and so rapidly that patient may be unable to protect him or her self
5	First Aid Measures	
5.1	Eye Contact	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Keep eyes wide open while rinsing
5.2	Skin Contact	In case of direct contact, rinse immediately with plenty of water for at least 15 minutes while removing contaminated clothes and shoes. Do not rub frozen parts as skin tissue may get damaged. Cover wound with sterile dressing. As soon as possible, place effected area in warm water bath not exceeding 40 °C (105 °F) In case inhalation, move to fresh air. If breathing is irregular or stopped, administer artificial respiration. In case of shortness of breath, give oxygen.
6	Fire Fighting Measures	
6.1	General	Move away from container and cool with water from a secure position. Don't direct water spray at Container Vent. If possible, stop flow of product. Wear self contained breathing apparatus for fire fighting if necessary. Fire Fighting may require special protective equipment
6.2	Specific Hazard	Spill will rapidly vaporize forming an oxygen deficient Vapour cloud Vapour cloud may obscure visibility.
7	Accidental Release Measures	Evacuate personnel to safe areas. Ventilate the area. Monitor oxygen level if possible. Wear self contained breathing apparatus when entering areas unless atmosphere proved to be safe. Stop leakage or spillage if possible. Prevent liquid from entering sewers, basements and work pits as its accumulation is dangerous. Increase ventilation to the release area.
8	Handling & Storage	Only trained and qualified persons should handle the Liquid Nitrogen. Prevent entrapment of cryogenic liquid in closed systems not protected with relief devices. Only equipment

- 8 Handling & Storage** designed for liquid nitrogen must be used on it. Cryogenic Containers are equipped with pressure relief devices to control internal pressure. Under normal conditions these containers periodically vent product.
- 9 Personal Protective Equipment**
- 9.1 Hands Protection** Loose fitted thermal insulated or leather gloves to be used for Liquid Nitrogen and Work Gloves are recommended when handling cylinders
- 9.2 Eyes Protection** Protect eyes, face and skin from liquid splashes. Safety Glasses are recommended for eyes protection
- 9.3 Skin & Body Protection** Never allow any unprotected part of the body to touch uninsulated pipes or vessels which contain cryogenic liquids. The extremely cold metal will cause the flesh to stick fast and tear when one attempts to withdraw from it. Safety Shoes are recommended for handling cylinders. Ensure adequate ventilation in confined areas.
- 10 Physical & Chemical Properties**
- 10.1 Physical Status** Liquefied Gas
- 10.2 Colour** Colourless
- 10.3 Odour** No Odour
- 10.4 Boiling Point** -196 °C (-321 °F)
- 11 Stability & Reactivity** Stable under normal conditions.

Prepared By Management Representative	Reviewed By Production Manager	Approved By General Manager	Issued On 01/04/06
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