



**ELLENBARRIE  
INDUSTRIAL GASES LTD**

REGD. OFFICE : 3A RIPON STREET KOLKATA 700 016. INDIA  
PHONES : 2229-1923/6723/3097, 2249-1922  
FAX : 91 (033) 2249-3396. E-mail : ellenbarrie@vsnl.com

## MATERIAL SAFETY DATA SHEET

---

### 1. COMPANY IDENTIFICATION AND PRODUCT IDENTIFICATION

---

Ellenbarrie Industrial Gases Ltd.  
3A, Ripon Street  
Kolkata – 700 016  
West Bengal  
India

PLANTS :

- 1) D-25 Industrial Area  
Kalyani, Dist.-Nadia  
West Bengal - 741235
- 2) National Highway No.6  
Opposite WBIIDC Growth Centre  
Uluberia, Dist. – Howrah  
West Bengal

**Product Details** : Nitrogen, Liquid / Gaseous.

**Chemical Family** : Inorganic, Gas

**Chemical Name** : Nitrogen

**Common Names / Synonyms** : LIN, Liquid Nitrogen, Nitrogen,  
Compressed Nitrogen, Nitrogen Gas.

---

### 2. COMPOSITION

---

**Oxygen** : 99.5% to 99.9998%

---

### 3. HAZARDS IDENTIFICATION

---

- a) **Characteristics** : Colourless gas, odorless, slightly soluble in water. Non-toxic and Non-flammable.
  
- b) **Physical Hazards** : Containers may rupture or explode under excessive pressure and / or if exposed to heat.
  
- c) **Potential Health Effects** : Simple Asphyxiant. Exposure may cause irritation, nausea, difficulty in breathing, dizziness, vomiting. Headache, tingling sensation, convulsions. Coma.

Contact with Liquid form may cause blisters or frostbite.

Contact with evaporating Liquid may cause tissue freezing.

---

### 4. FIRST AID

---

**Inhalation:** Remove to uncontaminated area. Give artificial respiration or administer Oxygen Get medical attention.

**Skin Contact:** If frostbite or freezing occur, flush with lukewarm water. Get immediate medical attention.

**Eye Contact:** Remove to uncontaminated area. Open eyelids wide to allow liquid to evaporate. Get Medical attention.

---

## 5. FIRE FIGHTING

---

- a) **Fire and Explosion Hazards** : Non – flammable. Containers may rupture violently from pressure when involved in a fire situation.
- b) **Extinguishing Media** : None required.
- c) **Fire Fighting Instructions** : Firefighters should wear respiratory protection. Move the container from fire area if it can be done without risk. Continue to cool fire-exposed cylinders until well after flames are extinguished.

---

## 6. ACCIDENTAL RELEASE MEASURES

---

Evacuate people from affected area. If leak is in users' equipment, purge with inert gas before attempting repairs.

---

## 7. HANDLING AND STORAGE

---

Liquid Nitrogen cannot be handled in Carbon or low alloy steel. Stainless Steel and Copper are acceptable.

Store in a cool, Dry place with adequate ventilation.

Never carry a Compressed Gas Cylinder or a container filled with Cryogenic Liquid in an enclosed space. A leak can result in a fire, explosion or toxic exposure.

---

## **8. PHYSICAL AND CHEMICAL PROPERTIES**

---

<u>PARAMETER</u>	<u>ATTRIBUTE / VALUE</u>
Physical State	Cryogenic Liquid / Gas
Colour	Colourless
Odor	Odorless
Molecular Weight	28.0134
Molecular Formula	N <sub>2</sub>
Boiling Point	-196°C (-346°F)
Freezing Point	-210°C
Vapour Pressure	760mm Hg at -196°C
Vapour Density (Air = 1)	0.967
Specific Gravity	Not applicable
Solubility (H <sub>2</sub> O)	1.6% at 20°C
PH	Not Applicable

---

## 9. EXPOSURE CONTROLS

---

**Engineering Controls:** Use local exhaust to prevent concentration in air.

**Eye Protection:** Wear splash resistant safety goggles where contact with Liquid is possible. Eye protection not required for gas.

**Skin Protection:** Insulated gloves recommended for Liquids.

**Other Protection:** Safety shoes, Safety shower.

---

## 10. STABILITY AND REACTIVITY

---

**Stability** : Stable

**Incompatibilities:** Metals, Oxidizing Materials.

**Polymerization** : Will not occur.

---

## 11. TOXOLOGICAL INFORMATION

---

No significant toxic effects.

---

## 12. ECOLOGICAL INFORMATION

---

Not Applicable.

---

### **13. DISPOSAL CONSIDERATION**

---

Do not attempt to dispose off residual or unused quantities. Close valve tightly after use.

#### **DISCLAIMER :**

Although reasonable care has been taken in the preparation of details, Ellenbarrie extends no warranties, guarantees or representations, express or implied regarding the product or information herein and assumes no responsibility regarding the suitability of this information for the user's intended purpose or for the consequences of its use.