

## Liquid Nitrogen

### 1 Identification of the substance/mixture and of the company/undertaking

<b>Product identifier</b>	
<b>Trade name</b>	: Nitrogen (refrigerated)
<b>SDS Nr</b>	: SDS_089R_CLP
<b>Chemical description</b>	: Nitrogen (refrigerated) CAS No :007727-37-9 EC No :231-783-9 Index No :---
<b>Chemical formula</b>	: N <sub>2</sub>
<b>Registration-No.</b>	: Listed in Annex IV / V REACH, exempted from registration.
<b>Use</b>	: Industrial and professional. Perform risk assessment prior to use.

### Classification of the substance or mixture

**Hazard Class and Category Code**  
**Regulation EC 1272/2008 (CLP)**

### Manufacturer / Distributor:

**Ehsan International Gases**  
40/9, Aurangabad, Nazimabad  
#3, Karachi 74600, Pakistan.  
+92 21 36612091 – 36612907  
[info@ehsan.com.pk](mailto:info@ehsan.com.pk)  
[www.ehsan.com.pk](http://www.ehsan.com.pk)

### 2 Hazards identification

- **Physical hazards** : Gases under pressure - Refrigerated liquefied gas - Warning (H281)  
**Classification EC 67/548 or EC 1999/** : Not included in Annex VI.
- 45** Not classified as dangerous preparation/substance.  
No EC labelling required.

## Liquid Nitrogen

### Label elements

#### Labelling Regulation EC 1272/2008 ( CLP)

- **Hazard pictograms**
- **Hazard pictograms code** : GHS04
- **Signal word**: Warning
- **Hazard statements** : H281 : Contains refrigerated gas; may cause cryogenic burns or injury.
- **Precautionary statements**
- **Prevention** : P282 : Wear cold insulating gloves/face shield/eye protection.
- **Response** : P336+P315 : Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice / attention.
- **Storage** : P403 : Store in a well-ventilated place.

#### Labelling EC 67/548 or EC 1999/45

- Symbol(s)** : None.  
**R Phrase(s)** : None.  
**S Phrase(s)** : None.

### Other hazards

## 3 Composition/information on ingredients

**Other hazards** : Asphyxiant in high concentrations.

**Substance / Preparation** : Substance.

Substance name	Contents	CAS No	EC No	Index No	Registration no	Classification
Nitrogen (refrigerated)	:		100 %	7727-37-9	231-783-9 -----	NOTE 1 ..... Press. Gas (H281) Press. Gas (H281)

Contains no other components or impurities which will influence the classification of the product. Note

1: Listed in Annex IV / V REACH, exempted from registration.

Note 2: Registration deadline not expired.

Full text of R-phrases see chapter 16

## 4 First aid measures

- **Inhalation** : In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
- **Skin/eye contact** : Immediately flush eyes thoroughly with water for at least 15 minutes.

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In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance.

- **Ingestion** : Ingestion is not considered a potential route of exposure.

### 5 Fire-fighting measures

**Specific hazards** : Exposure to fire may cause containers to rupture/explode.

**Hazardous combustion products** : None.

**Extinguishing media**

- **Suitable extinguishing media** : All known extinguishants can be used.

**Specific methods** : If possible, stop flow of product.

Move away from the container and cool with water from a protected position. If leaking do not spray water onto container. Water surrounding area (from protected position) to contain fire.

**Special protective equipment for fire fighters** : In confined space use self-contained breathing apparatus.

### 6 Accidental release measures

### 7 Handling and storage

**Personal precautions**

: Evacuate area.

Use protective clothing.

Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Ensure adequate air ventilation.

**Environmental precautions**

: Try to stop release.

Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

**Clean up methods**

: Ventilate area.

**Handling** : Suck back of water into the container must be prevented.

Do not allow backfeed into the container.

Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Refer to supplier's container handling instructions.

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### 8 Exposure controls/personal protection

**Storage** : Keep container below 50°C in a well ventilated place.

**Personal protection** : Ensure adequate ventilation.  
Protect eyes, face and skin from liquid splashes.

### 9 Physical and chemical properties

<b>Physical state at 20 °C</b>	: Gas.
<b>Colour</b>	: Colourless liquid.
<b>Odour</b>	: No odour warning properties.
<b>Molecular weight</b>	: 28
<b>Melting point [°C]</b>	: -210
<b>Boiling point [°C]</b>	: -196
<b>Critical temperature [°C]</b>	: -147
<b>Vapour pressure [20°C]</b>	: Not applicable.
<b>Relative density, gas (air=1)</b>	: 0.97
<b>Relative density, liquid (water=1)</b>	: 0.8
<b>Solubility in water [mg/l]</b>	: 20
<b>Other data</b>	: Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

### 10 Stability and reactivity

**Hazardous decomposition products** : None.

### 11 Toxicological information

**Chemical stability** : Stable under normal conditions.

**Toxicity information** : No known toxicological effects from this product.

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### 12 Ecological information

### 13 Disposal considerations

**Ecological effects information:** Can cause frost damage to vegetation.

**General** : Do not discharge into any place where its accumulation could be dangerous.  
Contact supplier if guidance is required.

### 14 Transport information

**UN number** : 1977  
**• Labelling ADR, IMDG, IATA** : 2.2 : Non flammable, non toxic gas.

#### Land transport

**ADR/RID**  
**H.I. nr** : 22  
**UN proper shipping name** : NITROGEN, REFRIGERATED LIQUID  
**Transport hazard class(es)** : 2  
**- ADR/RID Classification code** : 3 A  
**- Packing Instruction(s) - General** : P203  
**- Tunnel Restriction** : C/E Tank carriage: Passage forbidden through tunnels of category C, D and E; Other carriage: Passage forbidden through tunnels of category E

#### Sea transport

**- IMO-IMDG code**  
**• Proper shipping name** : NITROGEN, REFRIGERATED LIQUID  
**• Class** : 2.2  
**- IMO Packing group** : P203  
**- Emergency Schedule (EmS) - Fire** : F-C

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- Emergency Schedule (EmS) - Spillage : S-V
- Instructions - Packing : P203

### 15 Transport information (continued)

#### Air transport

- ICAO/IATA
- Proper shipping name : NITROGEN, REFRIGERATED LIQUID
- Class : 2.2
- Passenger and Cargo Aircraft : - Packing instruction : 202 • Cargo Aircraft only :
- Packing instruction : 202

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 containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
- Ensure there is adequate ventilation.

### 16 Regulatory information

- Compliance with applicable regulations.

**Safety, health and environmental regulations/legislation specific for the substance or mixture** : Ensure all national/local regulations are observed.

### 17 Other information

**Seveso regulation 96/82/EC** : Not covered.

May cause frostbite.

Keep container in a well-ventilated place.

Do not breathe the gas.

Asphyxiant in high concentrations.

The hazard of asphyxiation is often overlooked and must be stressed during operator training.

This Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws.

## Liquid Nitrogen

### DISCLAIMER OF LIABILITY

: 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. Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.