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Safety advice.

Compressed gases

Safety Data Sheet
NITROGEN
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Version: 01

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	NITROGEN.
UN-Number	UN1066
Recommended Use	Compressed gas [NOT TOBE USED AS MEDICINAL GAS]
Synonyms	IOLAR Nitrogen , Compressed Nitrogen

Manufacturer's Registered Office	Oxygen House, P-43 Taratala Road, Kolkata - 700 088, India www.linde.in
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Telephone Number	(+91 33) 66021600
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24 Hour Emergency Contact Number:	(+91) 9831851034
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Linde India Limited
Oxygen House, P-43 Taratala Road, Kolkata-700 088
Phone (+91 33) 66021600

2. HAZARDS IDENTIFICATION

WARNING!	EMERGENCY OVERVIEW	
	Simple asphyxiant - this product does not contain Oxygen and may cause suffocation if released in confined area. Maintain oxygen levels above 19.5%. Contents under pressure this line will be changed by High pressure compressed gas Keep at temperatures below 52°C / 125°F	
Appearance Colorless	Physical State Compressed gas	Odor Odorless

OSHA Regulatory Status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Principle Routes of Exposure Inhalation.

Acute Toxicity

Inhalation Simple asphyxiant. May cause suffocation by displacing the oxygen in the air. Exposure to oxygen-deficient atmosphere (<19.5%) may cause dizziness, drowsiness, nausea, vomiting, excess salivation, diminished mental alertness, loss of consciousness and death. Exposure to atmospheres containing 8-10% or less oxygen will bring about unconsciousness without warning and so quickly that the individuals cannot help or protect themselves. Lack of sufficient oxygen may cause serious injury or death.

Eyes None known.

Skin None known.

Skin Absorption Hazard No known hazard in contact with skin.

Ingestion Not an expected route of exposure.

Chronic Effects None known

Aggravated Medical Conditions None known

Environmental Hazard See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Volume %	Chemical Formula
Nitrogen	7727-37-9	>99	N ₂

4. FIRST AID MEASURES

Eye Contact None under normal use. Get medical attention if symptoms occur.

Skin Contact None under normal use. Get medical attention if symptoms occur.

Inhalation PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF INHALATION OVEREXPOSURE. RESCUE

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PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS (SCBA).

Conscious inhalation victims should be assisted to an uncontaminated area and inhale fresh air. If breathing is difficult, Administer oxygen under medical supervision / trained personnel supervision. Unconscious persons should be moved to an uncontaminated area and, as necessary, given artificial resuscitation and supplemental oxygen. Treatment should be symptomatic and supportive.

Ingestion None under normal use. Get medical attention if symptoms occur.

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties Not flammable. **Does not support combustion.**

Suitable Extinguishing Media Use extinguishing measures appropriate to local circumstances and the surrounding environment.

Explosion Data

Sensitivity to Mechanical Impact None

Sensitivity to Static Discharge None

Specific Hazards Arising from the Chemical Cylinders may rupture under extreme heat. Continue to cool fire-exposed cylinders until flames are extinguished. Damaged cylinders should be handled only by specialists.

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Ensure adequate ventilation. Evacuate personnel to safe areas. Use personal protective equipment. Monitor oxygen level.

Environmental Precautions Prevent the spreading of vapors through sewers, ventilation systems, and confined areas.

Methods for Containment Stop the flow of gas or remove the cylinder to an outdoor location if this can be done without risk. If a leak is in the container or container valve, contact the appropriate emergency telephone number in Section 1 or call your closest Linde location.

Methods for Cleaning Up Return cylinder to Linde India Ltd.

7. HANDLING AND STORAGE

Handling Use only in ventilated areas. Never attempt to lift a cylinder by its valve protection cap. Protect cylinders from physical damage; do not drag, roll, slide or drop. When moving cylinders, even for a short distance, use a cart designed to transport cylinders. Use equipment rated for cylinder pressure. Use a backflow preventive device in the piping. Never insert an object (e.g., wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage the valve, causing a leak to occur.

Close valve after each use and when empty. If a user experiences any difficulty operating the cylinder valve discontinue use and contact the supplier.

Never put cylinders into trunks of cars or unventilated areas of passenger vehicles. Never attempt to re-fill a compressed gas cylinder without the owner's written consent. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit.

For additional recommendations consult rules number 18 & 20 of the Cylinders, Rules, 2016.

Storage Protect from physical damage. Cylinders should be stored upright with a valve protection cap in place and

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firmly secured to prevent falling. Store in a cool, dry, well-ventilated area of non-combustible construction away from **high traffic** areas and emergency exits. Keep at temperatures below 52°C / 125°F.

Full and empty cylinders should be segregated. Use a "First-In-First-Out" (FIFO) inventory system to prevent full cylinders from being stored for excessive periods of time. Always store and handle compressed gas cylinders in accordance with rule number 21 of the **Cylinders, Rules, 2016**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.
Engineering Measures	Showers. Eyewash stations. Ventilation systems. Local exhaust ventilation to prevent accumulation of high concentrations and maintain air-oxygen levels at or above 19.5%.
Ventilation	Ensure adequate ventilation, especially in confined areas.
Personal Protective Equipment	
Eye/Face Protection	Wear protective eyewear (safety glasses).
Skin and Body Protection	Work gloves and safety shoes are recommended when handling cylinders.
Respiratory Protection	
General Use	No special protective equipment is required.
Emergency Use	Use positive pressure airline respirator with escape cylinder or self-contained breathing apparatus for oxygen-deficient atmospheres (<19.5%).
Hygiene Measures	Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless.	Odor	Odorless.
Odor Threshold	No information available.	Physical State	Compressed gas
Flash Point	No information available	Autoignition Temperature	No information available
Decomposition Temperature	No information available.	Boiling Point/Boiling Range	-195.8 °C / -320.4 °F
Freezing Point	-209.9 °C / -345.9 °F	Molecular Weight	28.01
Water Solubility	Very slight	Evaporation Rate	No information available
Vapor Pressure	No data available.	Vapor Density	0.97 (air = 1)
Gas Density	0.072 lb/ft ³ (1.153 kg/m ³) (@21.1°C)	VOC Content (%)	Not applicable.
Specific Vol.@21.1°C & 1 atm	13.8 ft ³ /lb (0.867 m ³ /kg)	Critical Pressure	492.9 psia (3399 kPa abs)
Flammability Limits in Air			
Upper	Not applicable		
Lower	Not applicable		

10. STABILITY AND REACTIVITY

Stability	Stable.
Incompatible Products	None Known.
Conditions to Avoid	None Known.
Hazardous Decomposition Products	None known
Hazardous Polymerization	Hazardous polymerization does not occur.

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11. TOXICOLOGICAL INFORMATION**Acute Toxicity**

LD50 Oral:	No information available.
LD50 Dermal:	No information available.
LC50 Inhalation:	No information available.
Inhalation	Product is a simple asphyxiant.
Repeated Dose Toxicity	No information available.

Toxicity

Chronic Toxicity	None known.
Carcinogenicity	Contains no ingredient listed as a carcinogen.
Irritation	No information available.
Sensitization	No information available.
Reproductive Toxicity	No information available.
Developmental Toxicity	Oxygen deficiency during pregnancy has produced developmental abnormalities in humans and experimental animals.
Synergistic Materials	None known.
Target Organ Effects	None known.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

Ozone depletion potential; ODP; (R-11 = 1): Does not contain ozone depleting chemical (40 CFR Part 82).

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods	Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container PROP-ERLY LABELED WITH ANY VALVE OUTLET PLUGS OR CAPS SECURED AND VALVE PROTECTION CAP IN PLACE to Linde India Ltd for proper disposal.
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14. TRANSPORT INFORMATION**DOT**

Proper shipping name	Nitrogen, compressed
Hazard Class	2.2
Subsidiary Class	None
UN-Number	UN1066
Description	UN1066, Nitrogen, compressed, 2.2

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ADR

Proper Shipping Name	Nitrogen, compressed
Hazard Class	2.2
UN-Number	UN1066
Classification Code	1A
Description	UN1066, Nitrogen, compressed, 2.2

15. REGULATORY INFORMATION**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	Yes
Reactive Hazard	No

16. OTHER INFORMATION

General: Ensure all national/ local regulations are observed. The hazard of asphyxiation is often overlooked and must be stressed during operator training.

Document Information: In preparing this document help has been taken from MSDS for Linde (US)

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End of Safety Data Sheet

Linde India Limited (Head Office)
Oxygen House, P-43 Taratala Road, Kolkata-700 088
Phone (+91 33) 66021600