



INTERNATIONAL INDUSTRIAL GASES LTD

Safety Data Sheet

Compressed gases

Material Safety Data Sheet

NITROGEN

Issue Date: 21-08-2024

Revision No: 01

Revision Date: 21-08-2024

Version: 01

Contents

1. PRODUCT AND COMPANY IDENTIFICATION	3
2. HAZARDS IDENTIFICATION	3
3. COMPOSITION/INFORMATION ON INGREDIENTS	4
4. FIRST AID MEASURES	4
5. FIRE-FIGHTING MEASURES	4
6. ACCIDENTAL RELEASE MEASURES.....	4
7. HANDLING AND STORAGE	5
8. EXPOSURE CONTROLS / PERSONAL PROTECTION	5
9. PHYSICAL AND CHEMICAL PROPERTIES	6
10. STABILITY AND REACTIVITY	7
11. TOXICOLOGICAL INFORMATION.....	7
12. ECOLOGICAL INFORMATION	7
13. DISPOSAL CONSIDERATIONS	7
14. TRANSPORT INFORMATION.....	8
15. REGULATORY INFORMATION.....	8
16. OTHER INFORMATION	9
DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES	9

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: NITROGEN

Manufacturer's Registered Office: 146 Andul Road, Howrah - 711103, India

Manufacturer's Website: www.iigas.com

Telephone Number: (+91 033) 2668 4725

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:

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 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 spreading of vapors through sewers, ventilation systems and confined areas.

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

Methods for Cleaning Up Return cylinder to IIGAS.

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 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 Gas Cylinder, 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. Gloves must be clean and free from grease or oil.

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: Handle in accordance with good industrial hygiene and safety practices.

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 slightly soluble.

Evaporation Rate No information available.

Vapor Pressure: No information available.

Vapor Density 0.97 (air=1)

Gas Density 1.153 kg/m³ (0.072 lb/ft³) @21.1°C

VOC Content (%) Not applicable.

Specific Vol.@21.1°C & 1 atm: 13.8 ft³/lb.

Critical Pressure: 492.9 psia.

Flammability Limits in Air.

Upper: Not applicable.

Lower: Not applicable.

10. STABILITY AND REACTIVITY

Stability: Stable

Incompatible Products: Not known.

Conditions to Avoid: Not known.

Hazardous Decomposition: Products None known.

Hazardous Polymerization: Hazardous polymerization does not occur.

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 Not 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 properly labeled with any valve outlet plugs or caps secured and valve protection cap in place to iigas for proper disposal.

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.

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.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should decide as to the suitability of the information for their purpose(s). The information contained in this document only covers the hazards presented by this material, it does not constitute a workplace risk assessment.