



**MATERIAL SAFETY DATA SHEET**

**PRODUCT NAME: XENON**

**1. Product and Company Identification**

BOC India Limited,  
Oxygen House  
P-43 Taratala Road  
Kolkata 700 0888

BOC India Limited  
Unit:

TELEPHONE NUMBER: (033) 24014708-20

Customer Service Center: 1800 345 6789

PRODUCT NAME: XENON  
CHEMICAL NAME: Xenon  
COMMON NAMES/SYNONYMS: Xenon, compressed

**2. Composition, Information on Ingredients**

**EXPOSURE LIMITS<sup>1</sup>:**

INGREDIENT	% VOLUME	PEL	TLV	
Xenon FORMULA: Xe CAS: 7440-63-3	99.9 to 99.995	None Established	Simple Asphyxiant	

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

**3. Hazards Identification**

**EMERGENCY OVERVIEW**  
Odorless, colorless, nonflammable gas. Simple Asphyxiant - This product does not contain oxygen and may cause asphyxia if released in a confined area. Maintain oxygen levels above 19.5%. Contents under pressure. Use and store below 52 ° C.

**PRODUCT NAME: XENON****ROUTE OF ENTRY:**

Skin Contact No	Skin Absorption No	Eye Contact No	Inhalation Yes	Ingestion No
--------------------	-----------------------	-------------------	-------------------	-----------------

**HEALTH EFFECTS:**

Exposure Limits No	Irritant No	Sensitization No
Teratogen No	Reproductive Hazard No	Mutagen No
Synergistic Effects None reported		

Carcinogenicity: --OSHA: No

**EYE EFFECTS:**

None known.

**SKIN EFFECTS:**

None known.

**INGESTION EFFECTS:**

None known. Ingestion is unlikely as product is gas at room temperature.

**INHALATION EFFECTS:**

Product is a simple asphyxiant. High concentrations may exclude an adequate supply of oxygen to the lungs. Effects of oxygen deficiency resulting from simple asphyxiants may include: rapid breathing, diminished mental alertness, impaired muscular coordination, faulty judgement, depression of all sensations, emotional instability, and fatigue. As asphyxiation progresses, nausea, vomiting, prostration, and loss of consciousness may result, eventually leading to convulsions, coma, and death.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** None known.

**POTENTIAL ENVIRONMENTAL EFFECTS:** Not expected to be toxic to fish and wildlife.

## 4. First Aid Measures

**EYES:**

None required.

**SKIN:**

None required.

**INGESTION:**

None required.

**INHALATION:**

PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS. Victims should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, and if breathing has stopped, administer artificial resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive.

**PRODUCT NAME: XENON**

## 5. Fire Fighting Measures

Conditions of Flammability: Nonflammable		
Flash point: None	Method: Not Applicable	Autoignition Temperature: None
LEL(%): None		UEL(%): None
Hazardous combustion products: None		
Sensitivity to mechanical shock: None		
Sensitivity to static discharge: None		

**FIRE AND EXPLOSION HAZARDS:**

Nonflammable. Cylinder may vent rapidly or rupture violently from pressure when involved in a fire situation.

**EXTINGUISHING MEDIA:**

None required. Use as appropriate for surrounding materials.

**FIRE FIGHTING INSTRUCTIONS:**

Firefighters should wear respiratory protection (SCBA) and full turnout or Bunker gear. Continue to cool fire-exposed cylinders until well after flames are extinguished.

## 6. Accidental Release Measures

Evacuate all personnel from affected area. Use appropriate protective equipment (See Section 8). Stop the flow of gas or remove cylinder to outdoor location if this can be done without risk. Ventilate enclosed areas. If leak is in container or container valve, contact the appropriate emergency telephone number listed in Section 1 or call your closest BOC location.

## 7. Handling and Storage

**Electrical classification:**

Non-hazardous.

This gas mixture is noncorrosive and may be used with all common structural materials.

Use only in well-ventilated areas. Valve protection caps must remain in place unless container is secured with valve protection outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder. Do not insert any object (i.e.: screwdriver) into valve cap openings as this can damage the valve causing leakage.

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area of non-combustible construction away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 52 °C. Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Use a "first in-first out" inventory system to prevent full cylinders being stored for excessive periods of time.

**PRODUCT NAME: XENON**

Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid form in an enclosed space such as a car trunk, van or station wagon. A leak can result in a fire, explosion, asphyxiation or a toxic exposure.

## 8. Exposure Controls, Personal Protection

**ENGINEERING CONTROLS:**

Use local exhaust in combination with general ventilation as necessary to prevent accumulation of high concentrations and maintain air oxygen levels at or above 19.5%.

**EYE/FACE PROTECTION:**

Safety goggles or glasses as appropriate for the job.

**SKIN PROTECTION:**

Protective gloves of material appropriate for the job.

**RESPIRATORY PROTECTION:**

For emergency release use a positive pressure NIOSH approved air-supplying respirator systems (SCBA or airline/escape bottle) using at a minimum Grade D air.

**OTHER/GENERAL PROTECTION:**

Safety shoes or other footwear as appropriate for the job.

## 9. Physical and Chemical Properties

<b>PARAMETER</b>	<b>VALUE</b>	<b>UNITS</b>
Physical state (gas, liquid, solid)	: Gas	
Vapor pressure	: No Data	
Vapor density (Air = 1)	: Not Available	
Evaporation point	: Not Available	
Boiling point	: -108.1	°C
Freezing point	: -111.8	°C
PH	: Not Applicable	
Specific gravity at 21°C, 1 atm.	: 4.56	
Oil/water partition coefficient	: Not Available	
Solubility (H <sub>2</sub> O)	: Slightly soluble	
Odor threshold	: Not Applicable	
Odor and appearance	: Odorless, colorless gas	

## 10. Stability and Reactivity

**STABILITY:**

Stable.

**INCOMPATIBLE MATERIALS/CONDITIONS:**

None.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

None.

**HAZARDOUS POLYMERIZATION:**

Does not occur.

<b>PRODUCT NAME: XENON</b>
----------------------------

## 11. Toxicological Information

**SKIN AND EYE:** Adverse effects are not expected.

**INHALATION:** Product is a simple asphyxiant. Maintain atmospheric oxygen at or above 19.5%.

**OTHER:** Oxygen deficiency during pregnancy has produced developmental abnormalities in humans and experimental animals.

## 12. Ecological Information

Product does not contain Class I or Class II ozone depleting substances. Not toxic. Will not bioconcentrate.

## 13. Disposal Considerations

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 BOC Gases or authorized distributor for proper disposal.

## 14. Transport Information

<b>PARAMETER</b>	<b>INDIA</b>
<b>PROPER SHIPPING NAME:</b>	<b>Xenon, Compressed</b>
<b>HAZARD CLASS:</b>	<b>2.2</b>
<b>IDENTIFICATION NUMBER:</b>	<b>UN 2036</b>
<b>SHIPPING LABEL:</b>	<b>NONFLAMMABLE GAS</b>

Compressed gas cylinders shall not be refilled without the express written permission of the owner. Shipment of a compressed gas cylinder which has not been filled by the owner or with his/her (written) consent is a violation of transportation regulations.

### **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 make a determination as to the suitability of the information for their particular purpose(s).