

# MATERIAL SAFETY DATA SHEET



**LIQUID CARBONIC INDUSTRIES**

810 JORIE BLVD. • OAK BROOK, IL 60521-2216 • 708 572-7500

NITROGEN, COMPRESSED

DOT: UN 1066  
HAZ.CL.: Division 2.2  
LABEL: Nonflammable Gas

October 1991

24 Hour Emergency Phone Numbers: (504) 673-8831; CHEMTREC (800) 424-9300

## SECTION I--PRODUCT IDENTIFICATION

CHEMICAL NAME: Nitrogen  
COMMON NAME AND SYNONYMS: Nitrogen or Nitrogen, Compressed (DOT)  
CHEMICAL FAMILY: Inert Gas FORMULA: N<sub>2</sub>

## SECTION II--HAZARDOUS INGREDIENTS

MATERIAL	VOLUME %	CAS NO.	1991-1992 ACGIH TLV UNITS
Nitrogen	99.9+	7727-37-9	Simple Asphyxiant* OSHA 1989 TWA - None Listed

\*Oxygen levels should be maintained at greater than 18 molar % at normal atmospheric pressure (pO<sub>2</sub>>135 torr).

## SECTION III--PHYSICAL DATA

BOILING POINT (°F.): -320.5  
VAPOR PRESSURE: \*  
VAPOR DENSITY (AIR=1): @ 70°F = 0.97  
SOLUBILITY IN WATER: Very slightly  
APPEARANCE AND ODOR: Colorless, odorless gas  
\* Above the critical temperature of -233°F

SPECIFIC GRAVITY (H<sub>2</sub>O=1): N/A (Gas)  
% VOLATILE BY VOLUME: N/A (Gas)  
EVAPORATION RATE (BUTYL ACETATE=1): N/A (Gas)

## SECTION IV--FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): N/A  
EXTINGUISHING MEDIA: Nonflammable, Inert Gas  
SPECIAL FIRE FIGHTING PROCEDURES: N/A

FLAMMABLE LIMITS: LEL N/A UEL N/A

### UNUSUAL FIRE AND EXPLOSION HAZARDS:

If cylinders are involved in a fire, safely relocate or keep cool with water spray.

## SECTION V--HEALTH HAZARD DATA

Route(s) of Entry: Inhalation? Yes Skin? No Ingestion? No  
Carcinogenicity: NTP? No IARC Monographs? No OSHA? No

### EFFECTS OF OVEREXPOSURE:

Inhalation: Overexposure to high concentrations so as to exclude an adequate supply of oxygen to the lungs causes dizziness, drowsiness and eventual unconsciousness. Persons in ill health where such illness would be aggravated by exposure to nitrogen should not be allowed to work with or handle this product.

### EMERGENCY AND FIRST AID PROCEDURES:

If Inhaled: Remove to fresh air. If unconscious or breathing is difficult, administer artificial respiration with supplemental oxygen. Keep warm and at rest. Caution when entering contaminated areas to ventilate to acceptable oxygen levels. See CGA Bulletin SB-2 "Oxygen Deficient Atmospheres."

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SECTION VI--REACTIVITY DATA

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STABILITY: UNSTABLE ( ) STABLE ( x )

CONDITIONS TO AVOID: None

INCOMPATIBILITY (MATERIALS TO AVOID): None

HAZARDOUS DECOMPOSITION PRODUCTS: None

HAZARDOUS POLYMERIZATION: MAY OCCUR ( ) WON'T OCCUR ( x )

CONDITIONS TO AVOID: None

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SECTION VII--SPILL OR LEAK PROCEDURES

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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Evacuate all personnel upwind and away from affected area. Stop leak if possible. If leaking container(s) is (are) in an enclosed area, ventilate to acceptable respirable oxygen level before entering.

WASTE DISPOSAL METHOD:

Locate leaking containers in a remote downwind area outside and allow to vent to atmosphere. Follow all federal, state and local regulations.

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SECTION VIII--SPECIAL PROTECTION INFORMATION

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RESPIRATORY PROTECTION: In event of major leak, self-contained breathing apparatus may be required.

VENTILATION: LOCAL EXHAUST ( X ) To prevent accumulation so as to exclude an adequate oxygen supply  
MECHANICAL (GENERAL) ( X )

PROTECTIVE GLOVES: Any material EYE PROTECTION: Safety goggles or glasses

OTHER PROTECTIVE EQUIPMENT: Safety shoes

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SECTION IX--SPECIAL PRECAUTIONS

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PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Protect cylinders against physical damage. Store in cool, dry, well-ventilated area away from sources of heat or direct sunlight. Do not allow areas where cylinders are stored to exceed 125°F. Use a check valve or trap in the cylinder discharge line to prevent hazardous backflow. Cylinders should be stored upright and firmly secured to prevent falling or being knocked over.

OTHER PRECAUTIONS:

Use only DOT or ASME coded containers. Use a pressure reducing regulator when connecting cylinder to lower pressure piping or systems. Close valve after each use and when empty. For more information refer to CGA Pamphlet P-1 "Safe Handling of Compressed Gases in Containers." Cylinders may not be refilled except by or with the consent of Liquid Carbonic.

Reporting under SARA, Title III, Section 313 not required.

NFPA 704 NO. for gaseous nitrogen = 1 0 0

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