

LELAND LIMITED, INC -- NITROUS OXIDE

=====  
MSDS Safety Information  
=====

FSC: 6830  
NIIN: 01-042-8103  
MSDS Date: 09/30/1993  
MSDS Num: CKHYV  
Product ID: NITROUS OXIDE  
MFN: 03  
Responsible Party  
Cage: 2W134  
Name: LELAND LIMITED, INC  
Box: 382  
City: BEDMINSTER NJ 07921  
Info Phone Number: 908-668-1008  
Emergency Phone Number: 908-668-1008  
Chemtrec IND/Phone: (800)424-9300  
Review Ind: Y  
Published: Y

=====  
Contractor Summary  
=====

Cage: 2W134  
Name: LELAND LTD INC  
Address: 2614 S CLINTON AVE  
City: SOUTH PLAINFIELD NJ 07080  
Phone: 908-561-2000; 908-568-1310

=====  
Item Description Information  
=====

=====  
Item Manager: S9G  
Item Name: NITROUS OXIDE, TECHNICAL  
Unit of Issue: PG  
Quantitative Expression: 00000000002EA  
UI Container Qty: 1  
Type of Container: CYLINDER/BOX

=====  
Ingredients  
=====

Cas: 10024-97-2  
RTECS #: QX1350000  
Name: NITROUS OXIDE  
Percent by Wt: 100.  
ACGIH TLV: 90 MG/M3;50 PPM  
ACGIH STEL: NOT ESTABLISHED

=====  
Health Hazards Data  
=====

LD50 LC50 Mixture: NONE PROVIDED BY MFR.

Effects of Exposure: SKIN: NO ADVERSE EFFECTS REPORTED FROM THE GAS. DUE TO RAPID EVAPORATION, THE LIQUID MAY CAUSE FROSTBITE WITH REDNESS, TINGLING, PAIN, OR NUMBNESS. EYE: CONTACT WITH LIQUEFIED GAS MAY CAUSE FROSTBITE, BLURRED VISION, REDNESS, PAIN. INGESTION: UNLIKELY. IF LIQUID IS SWALLOWED, FROSTBITE DAMAGE TO LIPS, MOUTH, & MUCOUS MEMBRANES MAY OCCUR. INHALATION: INHALATION OF HIGH

CONCENTRATIONS WITHOUT ADEQUATE OXYGEN CAN RESULT IN HEADACHE & SERIOUS ANOXIA CAUSING FATAL CARDIAL ARRHYTHMIAS OR BRAIN DAMAGE WITH CEREBRAL EDEMA, PERMANENT MENTAL DEFICIT & VISUAL SYSTEM INVOLVMENT. HIGH CONCENTRATIONS MIXED WITH AIR OR OXYGEN (SEE SUPP DATA)

Explanation Of Carcinogenicity: INADEQUATE EVIDENCE

Signs And Symptoms Of Overexposure: FROSTBITE, BLURRED VISION, TINGLING, PAIN, NUMBNESS, CENTRAL NERVOUS SYSTEM DEPRESSION, DROWSINESS, LIGHTHEADEDNESS, CONFUSION, HYSTERIA, ANESTHESIA, UNCONSCIOUSNESS.

Medical Cond Aggravated By Exposure: NONE PROVIDED BY MFR.

First Aid: INHALATION: IMMEDIATELY REMOVE FROM EXPOSURE AREA TO FRESH AIR. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION. MAINTAIN AIRWAY & BLOOD PRESSURE. KEEP AFFECTED PERSON WARM. GET MEDICAL ATTENTION IMMEDIATELY. SKIN: IN CASE OF FROST BITE, WARM AFFECTED SKIN IN WARM WATER (107 DEG F). IF WARM WATER IS UNAVAILABLE, GENTLY WRAP AFFECTED AREA IN BLANKETS. ALLOW CIRCULATION TO RETURN NATURALLY. GET MEDICAL ATTENTION IMMEDIATELY. EYE: IF CONTACT WITH LIQUIFIED OR COMPRESSED GAS OCCURS, WASH WITH LARGE AMOUNTS OF WARM WATER (APPROX 15 TO 20 MINS) GET MEDICAL ATTENTION IMMEDIATELY. INGESTION: (SEE SUPP DATA)

#### Handling and Disposal

Spill Release Procedures: NONE PROVIDED BY MANUFACTURER  
Neutralizing Agent: NO SPECIFIC ANTIDOTE. TREAT SYMPTOMATICALLY.

Waste Disposal Methods: NONE PROVIDED BY MANUFACTURER

Handling And Storage Precautions: STORE IN ACCORDANCE WITH 29 CFR 1910.101. FOR ASSISTANCE, CONTACT THE DISTRICT DIRECTOR OF THE EPA.

Other Precautions: NONE PROVIDED BY MANUFACTURER

#### Fire and Explosion Hazard Information

Flash Point Text: NONE PROVIDED BY

Autoignition Temp Text: NONE PROVIDED

Lower Limits: NONE PROVIDED

Upper Limit

s: NONE PROVIDE

Extinguishing Media: DRY CHEMICAL, CARBON DIOXIDE, OR HALON. FOR LARGER FIRES, USE WATER SPRAY, FOG OR STANDARD FOAM.

Fire Fighting Procedures: COOL FIRE-EXPOSED CYLINDERS WITH WATER FROM THE SIDE UNTIL WELL AFTER THE FIRE IS OUT. USE AGENTS SUITABLE FOR TYPE OF FIRE. COOL CONTAINERS WITH FLOODING AMOUNTS OF WATER, APPLIED FROM AS FAR A DISTANCE AS POSSIBLE.

Unusual Fire/Explosion Hazard: NONE PROVIDED BY MANUFACTURER

=====  
==

#### Control Measures

=====  
Respiratory Protection: SCBA ONLY REQUIRED IN CONFINED SPACES.

Ventilation: PROVIDE LOCAL EXHAUST OR PROCESS ENCLOSURE VENTILATION.

Protective Gloves: PROTECTIVE CLOTHING & GLOVES ARE NOT REQUIRED

Eye Protection: NOT REQUIRED BUT RECOMMENDED

Other Protective Equipment: PROTECTIVE CLOTHING NOT REQUIRED. AN EYE WASH STATION WITHIN THE IMMEDIATE AREA SHOULD BE PROVIDED.

Work Hygienic Practices: NONE PROVIDED BY MANUFACTURER

Supplemental Safety and Health: FIRST AID CONT: INGESTION: TREAT SYMPTOMATICALLY & GET MEDICAL ATTENTION. HEALTH CONT: MAY PRODUCT SIGNS OF CENTRAL NERVOUS SYSTEM DEPRESSION, INCLUDING DROWSINESS, LIGHTHEADEDNESS, CONFUSION, HYSTERIA, ANESTHESIA, UNCONSCIOUSNESS.

=====  
Physical/Chemical Properties

=====  
HCC: G3

Boiling Point: =-88.7C, -128.F

Melt/Freeze Pt: =-91.1C, -132.F

Decomp T

ext: NONE PROVIDED BY MFR.

Vapor Pres: 760 MMHG @ -88 DEG C

Vapor Density: NONE PROVIDED

Spec Gravity: 1.8122 G/L @ 25 DEG C

PH: NONE PROVIDED

Viscosity: 0.0145 CPS @ 25 DEG C

Evaporation Rate & Reference: NONE PROVIDED BY MFR.

Solubility in Water: 59% @ 25 DEG C

Appearance and Odor: COLORLESS GAS OR LIQUID WITH A SLIGHTLY SWEET ODOR AND TASTE

Percent Volatiles by Volume: NONE PROVIDED

Corrosion Rate: NONE PROVIDED BY MFR

=====  
Reactivity Data

=====  
Stability Indicator: YES SEE OTHER INFORMATION).

Stability Condition To Avoid: STABLE UNDER NORMAL TEMPERATURES & PRESSURES. AT TEMPERATURES GREATER THAN 300 DEG C. MAY DECOMPOSE & ACT AS AN OXIDIZER.

Materials To Avoid: ACETYLENE, ALUMINUM, AMMONIA, BORON (AMORPHOUS), CADMIUM, CARBON MONOXIDE, COBALT, COPPER, DITUNGSTEN CARBIDE, HYDRAZINE, HYDROGEN, HYDROGEN+OXYGEN, HYDROGEN SULFIDE, IRON, LEAD, LITHIUM HYDRIDE, NICKEL, ORGANIC PE ROXIDES,

Hazardous Decomposition Products: THERMAL DECOMPOSITION PRODUCTS MAY INCLUDE TOXIC OXIDES OF NITROGEN.

Hazardous Polymerization Indicator: NO

Conditions To Avoid Polymerization: HAZARDOUS POLYMERIZATION HAS NOT BE REPORTED TO OCCUR UNDER NORMAL TEMPERATURES AND PRESSURES.

=====  
Toxicological Information

=====  
Toxicological Information: NOT PROVIDED  
=====

=====  
Ecological Information

=====  
Ecological: NOT PROVIDED  
=====

=====  
MSDS Transport Information

=====  
Transport Information: NOT PROVIDED ON MSDS. SEE TRANSPORTATION DATA.  
=====

=====  
Regulatory Information

=====  
Federal Regulatory Informati  
on: NOT PROVIDED

State Regulatory Information: NOT PROVIDED  
=====

=====  
Other Information

=====  
Other Information: INHALATION: ASPHYXIAN: MULTIPLE CYLINDERS RELEASED IN A CONFINED SPACE MAY CAUSE ASPHYXIA. TARGET EFFECTS: SIMPLE ASPHYXIAN, CENTRAL NERVIOUS SYSTEM DEPRESSANT. POISONING MAY AFFECT BLOOD, LIVER AND KIDNEYS. MATERIALS TO AVOID CONTINUED: PHENYLLITHIUM, PHOSPHINE, SODIUM (GASE

OUS), STANNOUS CHLORIDE, TIN (II) OXIDE, TUNGSTEN CARBIDE

=====  
Transportation Information  
=====

Responsible Party Cage: 2W134  
Trans ID NO: 152503  
Product ID: NITROUS OXIDE  
MSDS Prepared Date: 09/30/1993  
Review Date: 04/19/2000  
MFN: 3  
Net Unit Weight: 7.9 GRAMS  
Multiple KIT Number: 0  
Unit Of Issue: PG  
Container QTY: 1  
Type Of Container: CYLINDER/BOX  
=====

=====  
Detail DOT Information  
=====

DOT PSN Code: KTJ  
DOT Proper Shipping Name: NITROUS OXIDE  
Hazard Class: 2.2  
UN ID Num: UN1070  
Label: NONFLAMMABLE GAS, OXIDIZER  
Non Bulk Pack: 304  
Bulk Pack: 314,315  
Max Qty Pass: 75 KG  
Max Qty Cargo: 150 KG  
Vessel Stow Req: A  
Water/Ship/Other Req: 40  
=====

=====  
Detail IMO Information  
=====

IMO PSN Code: KWH  
IMO P  
roper Shipping Name: NITROUS OXIDE  
IMDG Page Number: 2166  
UN Number: 1070  
UN Hazard Class: 2(2.2)  
IMO Packaging Group: -  
Subsidiary Risk Label: OXIDIZING AGENT  
EMS Number: 2-08  
MED First Aid Guide NUM: NON  
=====

=====  
Detail IATA Information  
=====

IATA PSN Code: SHY  
IATA UN ID Num: 1070  
IATA Proper Shipping Name: NITROUS OXIDE  
IATA UN Class: 2.2  
Subsidiary Risk Class: 5.1  
IATA Label: NON-FLAMMABLE GAS

&OXIDIZER  
Packing Note Passenger: 200  
Max Quant Pass: 75KG  
Max Quant Cargo: 150KG  
Packaging Note Cargo: 200

=====  
Detail AFI Information  
=====

AFI PSN Code: SHY  
AFI Proper Shipping Name: NITROUS OXIDE, COMPRESSED  
AFI Hazard Class: 2.2  
AFI UN ID NUM: UN1070  
AFI Label: 5.1  
Special Provisions: P5  
Back Pack Reference: A6.3, A6.5

=====  
HAZCOM Labe  
I  
=====

Product ID: NITROUS OXIDE  
Cage: 2W134  
Company Name: LELAND LTD INC  
Street: 2614 S CLINTON AVE  
City: SOUTH PLAINFIELD NJ  
Zipcode: 07080  
Health Emergency Phone: 908-668-1008  
Label Required IND: Y  
Date Of Label Review: 04/19/2000  
Status Code: A  
Origination Code: F  
Eye Protection IND: YES  
Skin Protection IND: YES  
Signal Word: CAUTION  
Respiratory Protection IND: YES  
Health Hazard: Slight  
Contact Hazard: Slight  
Fire Hazard: None  
Reactivity Haz  
ard: None

Hazard And Precautions: SKIN: NO ADVERSE EFFECTS KNOWN. DUE TO RAPID  
EVAPORATION, LIQUID MAY CAUSE FROSTBITE WITH REDNESS, TINGLING, PAIN, OR  
NUMBNESS. EYE: CONTACT WITH LIQUEFIED GAS MAY CAUSE FROSTBITE, BLURRED  
VISION, RE DNESS, PAIN. ORAL: FROSTBITE DAMAGE TO LIPS, MOUTH, & MUCOUS  
MEMBRANES . INHALATION OF HIGH CONCENTRATIONS W/O ADEQUATE OXYGEN CAN RESULT  
IN HEADACHE & SERIOUS ANOXIA CAUSING FATAL CARDIAL ARRHYTHMIAS OR BRAIN  
DAMAGE WITH CEREVRAL EDEMA, PERMAN

ENT MENTAL DEFICIT & VISUAL SYSTEM

INVOLVMENT. HIGH CONC MIXED WITH AIR OR OXYGEN MAY PRODUCT SIGNS OF CNS DEPRESSION, INCLUDING DROWSINESS, LIGHTHEADEDNESS , CONFUSION, HYSTERIA, ANETHESIA, UNCONSCIOUSNESS.

=====  
Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense.

The United States of America in no manner whatsoever expressly or implied warrants, states, or intends said information to have any application, use or viability by or to any person or persons outside the Department of Defense nor any person or persons contracting with any instrumentality of the United States of America and disclaims all liability for such use. Any person utilizing this instruction who is not a military or civilian employee of the United States of America should seek competent professional advice to verify and assume responsibility f

or the suitability of this information to their particular situation regardless of similarity to a corresponding Department of Defense or other government situation.