

LELAND LIMITED INC -- CARBON DIOXIDE, GAS

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

FSC: 4220  
NIIN: 01-391-9844  
MSDS Date: 10/19/1996  
MSDS Num: CJKBT  
Product ID: CARBON DIOXIDE, GAS  
MFN: 01  
Responsible Party  
Cage: 2W134  
Name: LELAND LIMITED INC  
Address: 382 SOMERVILLE RD  
Box: 382  
City: BEDMINSTER NJ 07  
921  
Info Phone Number: 908-668-1008  
Emergency Phone Number: 1-800-424-9300

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

Item Manager: S9I  
Item Name: LIFE RAFT,INFLATABLE  
Unit of Issue: EA  
UI Container Qty: 1

=====  
Ingredients  
=====

Cas: 124-38-9  
RTECS #: FF6400000  
Name: CARBON DIOXIDE GAS  
Percent by W  
t: 100.  
OSHA PEL: 9000 MG/M3;5000 PPM  
ACGIH TLV: 9000 MG/M3;5000 PPM  
ACGIH STEL: 54000 MG/M3

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

Route Of Entry Inds - Inhalation: YES  
Skin: YES  
Ingestion: NO  
Carcinogenicity Inds - NTP: NO  
IARC: NO  
OSHA: NO  
Effects of Exposure: TARGET ORGANS: HEART, RESPIRATORY AND NERVOUS SYSTEM.  
INHALATION: INITIALLY RESULTS IN A COMPENSATORY INCREASE IN BOTH RATE &  
DEPTH O

F VENTILATION. BEYOND A CERTAIN POINT MAY REVERSE TO HYPOVENTILATION RESULTING IN RESPIRATORY ACIDOSIS. DEATH FROM ASPHYXIA MAY OCCUR IF CONCENTRATION & DURATION OF EXPOSURE ARE SUFFICIENT. SKIN: NO EFFECTS FROM GAS. LIQUID MAY CAUSE FROSTBITE. EYES: AT HIGH CONCENTRATION IN AIR, MAY CAUSE STINGING SENSATION; MAY CAUSE IRRITATION. INGESTION: UNLIKELY. IF LIQUID IS SWALLOWED, MAY CAUSE FROSTBITE DAMAGE TO LIPS, MOUTH AND MUCOUS MEMBRANES.

Signs And Symptoms Of Overexposure: INHALATION: INCREASE IN BOTH RATE &

DEPTH OF VENTILATION. SKIN: REDNESS, TINGLING, PAIN, OR NUMBNESS IF LIQUID CONTACT IS MADE. IN SEVERE CASES, THE SKIN MAY BECOME HARD, WHITE, AND DEVELOP BLISTERS. EYES: STINGING SENSATION.

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 :FOR FROSTBITE, WARM AFFECTED AREA IN WATER (107F). IF

WARM WATER IS UNAVAILABLE, GENTLY WRAP AFFECTED AREA IN BLANKETS. ALLOW CIRCULATION TO RETURN NATURALLY. GET MEDICAL ATTENTION IMMEDIATELY. EYES: WASH WITH LARGE AMOUNTS OF WARM WATER FOR 15-20 MIN. GET MEDICAL ATTENTION IMMEDIATELY. INGESTION: TREAT SYMPTOMATICALLY & GET MEDICAL ATTENTION.

=====  
Handling and Disposal

=====  
Waste Disposal Methods: FOR ASSISTANCE, CONTACT THE DISTRICT DIRECTOR OF THE EPA.

Handling And Storage Precautions: STORE IN ACCORDANCE WITH 29 CFR 1910.101.  
Other Precautions: NONE

=====  
Fire and Explosion Hazard Information

=====  
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

Cool AFTER THE FIRE IS OUT. USE AGENTS SUITABLE FOR TYPE OF FIRE. COOL CYLINDERS WITH FLOODING AMOUNTS OF WATER, APPLIED FROM AS FAR A DISTANCE AS POSSIBLE.

Unusual Fire/Explosion Hazard: GAS-NEGLECTIBLE FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME CYLINDER-MAY RUPTURE IN HEAT OF FIRE.

=====  
Control Measures

=====  
Respiratory Protection: SCBA, ONLY REQUIRED IN CONFINED SPACES.  
Ventilation: PROVIDE

E GENERAL DILUTION VENTILATION.

Eye Protection: NOT REQUIRED, BUT ADVISABLE.

Other Protective Equipment: NOT REQUIRED UNLESS MULTIPLE CYLINDERS RELEASE IN  
CONFINED SPACES.

=====  
Physical/Chemical Properties  
=====

HCC: G3

Boiling Point: =-79.C, -110.2F

B.P. Text: (SUBLIMES)

Melt/Freeze Pt: =-57.C, -70.5F

M.P/F.P Text: @4000 MMHG

Vapor Pres: 43700 MMHG@21C

Vapor Density: 1.5

Spec Gravity: 1.52@21

C

PH: ACIDIC IN SOL'N

Solubility in Water: SOLUBLE

Appearance and Odor: ODORLESS. COLORLESS GAS, WITH A SLIGHT ACIDIC TASTE.

=====  
Reactivity Data  
=====

Stability Indicator: YES

Stability Condition To Avoid: STABLE UNDER NORMAL TEMPERATURES AND PRESSURES.

Materials To Avoid: ACRYLALDEHYDE, BA PEROXIDE, CE OXIDE, DIETHYL MG,  
ETHYLENEIMINE, HYDRAZINE, METAL ACETYLIDES, METAL HYDRIDES, METALS,

P

OTASSIUM, POTASSIUM-SODIUM ALLOYS, SODIUM, SODIUM PEROXIDE.

Hazardous Decomposition Products: TEMPERATURES ABOVE 1700 C MAY CAUSE  
DECOMPOSITION AND THE RELEASE OF OXYGEN AND HIGHLY TOXIC CARBON MONOXIDE.

Hazardous Polymerization Indicator: NO

Conditions To Avoid Polymerization: HARDOUS POLYMERIAZATION HAS NOT BEEN  
REPORTEDTO OCCUR UNDER NORMAL TEMPERATURES AND PRESSURE.

=====  
Toxicological Information  
=====

=====  
Ecological Information  
=====

=====  
MSDS Transport Information  
=====

Transport Information: PER MANUFACTURER OF THE LIFE RAFT: UN2990, LIFE-SAVING  
APPLIANCES, SELF-INFLATING.

=====  
Regulatory Information  
=====

=====  
=====  
Other Information  
=====  
=====

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

Responsible Party Cage: 2W134  
Trans ID NO: 147011  
Product ID: CARBON DIOXIDE, GAS  
MSDS Prepared Date: 10/19/1996  
Review Date: 04/12/2000  
MFN: 1  
Net Unit Weight: 4.46 LB GAS  
Multiple KIT Number:  
0

Unit Of Issue: EA  
Container QTY: 1

Additional Data: EACH DEVICE HAS A CYLINDER CONTAINING 205 CU FT OF CARBON  
DIOXIDE GAS. WEIGHT OF EMPTY CYLINDER = 10 .16 LBS, WEIGHT OF GAS PLUS  
CYLINDER IS 14.62 LBS. PSN PER MARKINGS ON THE STOCK.

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

DOT PSN Code: IHN  
DOT Proper Shipping Name: LIFE-SAVING APPLIANCES, SELF INFLATING  
Hazard Class: 9  
UN ID Num: UN2990  
Label  
: NONE  
Non Bulk Pack: 219  
Bulk Pack: NONE  
Max Qty Pass: NO LIMIT  
Max Qty Cargo: NO LIMIT  
Vessel Stow Req: A

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

IMO PSN Code: IYJ  
IMO Proper Shipping Name: LIFE-SAVING APPLIANCES, SELF-INFLATING  
IMDG Page Number: 9032  
UN Number: 2990  
UN Hazard Class: 9  
IMO Packaging Group: -  
Subsidiary Risk Label: -  
EMS Number:  
MED First Aid Guide NUM: ss  
=====

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

IATA PSN Code: PAY  
IATA UN ID Num: 2990  
IATA Proper Shipping Name: LIFE-SAVING APPLIANCES, SELF-INFLATING  
IATA PSN Modifier: ,(APPLIES TO LIFE-SAVING APPLIANCES THAT PRESENT A HAZARD IF  
THE SELF-INFLATING DEVICE IS ACTIVATED ACCIDENTALLY).  
IATA UN Class: 9  
IATA Label: MISCELLANEOUS  
Packing Note Passenger: SEE 905  
Max Quant Pass: SEE 905  
Max Quant Cargo: SEE 905  
Packaging Note Cargo:  
SEE 905  
Exceptions: A48, A87  
=====

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

AFI PSN Code: PAY  
AFI Proper Shipping Name: LIFE-SAVING APPLIANCES, SELF INFLATING  
AFI Hazard Class: 9  
AFI UN ID NUM: UN2990  
Special Provisions: P5  
Back Pack Reference: A13.11  
=====

=====  
HAZCOM Label  
=====

Product ID: CARBON DIOXIDE, GAS  
C  
age: 2W134  
Company Name: LELAND LTD INC  
Street: 2614 S CLINTON AVE  
City: SOUTH PLAINFIELD NJ  
Zipcode: 07080  
Health Emergency Phone: 1-800-424-9300  
Label Required IND: Y  
Date Of Label Review: 08/04/1999  
Status Code: A  
Origination Code: F  
Eye Protection IND: YES  
Signal Word: WARNING  
Respiratory Protection IND: YES  
Health Hazard: Moderate  
Contact Hazard: Slight  
Fire Hazard: None  
Reactivity Hazard: None  
Hazard And Precautions: TARGET ORGANS: HEART, RESPIRATORY AND NERVOUS SYSTEM.  
INHALATION: INIT

ALLY RESULTS IN A COMPENSATORY INCREASE IN BOTH RATE &  
DEPTH OF VENTILATION. BEYOND A CERTAIN POINT MAY REVERSE TO HYOPVENTILATI ON  
RESULTING IN RESPIRATORY ACIDOSIS. DEATH FFROM ASPHYXIA MAY OCCUR IF CONC.  
& DURATION OF EXPOSURE ARE SUFFICIENT. SKIN: NO EFFECTS FROM GAS. LIQUID  
MAY CAUSE FROSTBITE. EYES: AT HIGH CONC. IN AIR, MAY CAUSE STINGING  
SENSATION; MAY CAUSE IRRITATION. INGESTION: UNLIKELY. IF LIQUID IS SWALLOWED,  
MAY CAUSE FROSTBITE DAMAGE TO LIPS, MOUTH AND MUCOUS  
MEMBRANES.

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