

LIQUID AIR CORPORATION, INDUSTRIAL GASES DIVISION -- LIQUID NITROGEN -- 6830-00-285-4769

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Product Identification
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Product ID:LIQUID NITROGEN

MSDS Date:10/01/1985

FSC:6830

NIIN:00-285-4769

MSDS Number: BNWJZ

=== Responsible Party ===

Company Name:LIQUID AIR CORPORATION, INDUSTRIAL GASES DIVISION

Address:ONE CALIFORNIA PLAZA, SUITE 350

City:WALNUT CREEK

State:CA

ZIP:94596

Country:US

Info

Phone Num:415-977-6500

Emergency Phone Num:800-231-1366

CAGE:DO426

=== Contractor Identification ===

Company Name:CARDOX CORP DIV OF LIQUID AIR CORP

Address:6500 VILLAGE PKY SUITE 205

Box:City:DUBLIN

State:CA

ZIP:94568-3015

Country:US

Phone:415-977-6500

CAGE:1FX45

Company Name:LIQUID AIR CORPORATION

Address:2121 N. CALIFORNIA BLVD., SUITE 350

City:WALNUT CREEK

State:CA

ZIP:94596

Phone:510-977-6500

CAGE:DO426

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Composition/Information on Ingredients
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Ingred Name:LIQUI

D NITROGEN (MOLECULAR WEIGHT 28.013)

CAS:7727-37-9

RTECS #:QW9700000

Fraction by Wt: 100%

Other REC Limits:NONE SPECIFIED

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===== Hazards Identification =====

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:NITROGEN IS DEFINED AS A ASPHYXIANT.

OXYGEN LEVELS SHOULD BE MAINTAINED AT GREATER THAN 18 MOLAR PERCENT AT NORMAL ATMOSPHERIC PRESSURE WHICH IS EQUIVALENT TO PARTIAL PRESSURE OF 135 MM HG (ACGIH, 198 4-85).

EFFECTS OF EXPOSURE TO

HIGH CONCENTRATIONS SO AS TO DISPLACE THE OXYGEN IN AIR NECESSARY

FOR LIFE MAY INCLUDE:Explanation of Carcinogenicity:N/K LOSS OF

BALANCE/DIZZINESS; TIGHTNESS IN FRONT OF FOREHEAD;

TINGLING-TONGUE/FINGERTIPS/TOES; WEAKENED SPEECH;

Effects of Overexposure:RAPID REDUCTION-ABILITY TO PERFORM MOVEMENTS;

REDUCED CONSCIOUSNESS OF SURROUNDINGS; LOSS OF TACTILE SENSATIONS;

HEIGHTENED MENTAL ACTIVITY. SYMPTOMS MAY NOT OCCUR--THERE ARE NO DEFINITE WARNIN

G SYMPTOMS. CONTACT W/CRYOGENIC LIQUID OR

COLDPIPING CONTAININGTHE LIQUID CAN CAUSE TISSUE FREEZING OR

FROSTBITE ON

Medical Cond Aggravated by Exposure:N/K DERMAL CONTACT OR IF SPLASHED

INTO THE EYES. FOR MORE INFO SEE L'AIR LIQUIDE ENCYCLOPEDIA.

FROSTBITE EFFECTS ARE A CHANGE IN COLOR OF THE SKIN TO GRAY OR

WHITE POSSIBLY FOLLOWED BY BLISTERING.

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===== First Aid Measures =====

First Aid:PROMPT MED ATTN MANDATORY-ALL CASES OVEREXPOS. IN

HAL: REMOVE

TO FRESH AIR. QUICK REMOVAL FROM CONTAM AREA IS MOST IMPORTANT.

GIVE MOUTH TO MOUTH RESUSCITATION/SUPPLEMENTAL OXYGEN IF

UNCONSCIOUS. GET M ED AID. DERMAL CONTACT: FLUSH AFFECTED AREA

W/LUKEWARM WATER. DO NOT USE HOT WATER. A PHYSICIAN SHOULD SEE

PATIENT PROMPTLY IF CRYOGENIC "BURN" HAS RESULTED IN BLISTERING OR

DEEP TISSUE FREEZING.

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===== Fire Fighting Measures =====

Extinguishing Media:NONFLAMMABLE, INERT

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== Accidental Release Measures ==

Spill Release Procedures:STATIONARY CUSTOMER-SITE VESSELS SHOULD BE OPERATED IN ACCORD W/MFR'S & LIQ AIR INSTRUCTIONS. DON'T REPAIR, ADJUST OR MODIFY THE OPERATION OF VESSELS. IF THERE IS A MALFUNCTION/OTHER TYPE OF OPERATION AL PROBLEM W/VESSEL, CONTACT LIQ AIR CORP IMMED.

==== Handling and Storage =====

Handling and Storage Precautions:USE/STORE LIQ CYLNDRS IN VENTED (NO SUB- SURFACE/ CLOSED) AREA. KEEP CYLNDRS UPRIGHT. USE SPECIALIZED DOLLY. 1ST IN/ 1ST OUT INVENTORY SYSTEM.

Other Precautions:GAS CAN CAUSE SUFFOCATION W/O WARNING. NO CARBON/LOW ALLOY STEEL (18-8/18-10;COPPER/NICKEL & ALLOYS-OK). SEE CGA P-9/P-12/P-14/ SB-2. CYLNDRS REFILL BY QUALIFIED PRODUCER. TRANSPORT OF CYLINDER NOT FIL LED BY OWNER (W/O CONSENT) ILLEGAL

==== Exposure Controls/Personal Protection =====

Respiratory Protection:RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS.

Ventilation:LOCAL EXHAUST:TO PREVENT ACCUMULATION OF HIGH CONC SO AS TO REDUCE OXYGEN LEVEL IN AIR TO LESS THAN 18 MOLAR PRECENT.

Protective Gloves:LOOSE FITTING, INSULATED

Eye Protection:SAFETY GOGGLES OR GLASSES W/FACE SHIELD

Other Protective Equipment:SAFETY SHOES

Supplemental Safety and Health

EXCEPT WHERE SPECIFIED, THE HEALTH HAZARD DATA AND MOST OF THE OTHER DATA IN THIS MATERIAL SAFETY DATA SHEET ARE FOR GASEOUS NITROGEN. ONE VOLUME OF LI

QUID NITROGEN AT ITS BOILING POINT AND ATMOSPHERI C

PRESSURE WILL VAPORIZE INTO APPROXIMATELY 695 VOLUMES OF GASEOUS NITROGEN AT 70F & 1 ATMOSPHERE.

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

HCC:G3

Boiling Pt:B.P. Text:-316F,-220C

Melt/Freeze Pt:M.P/F.P Text:-364F,-220C

Decomp Temp:Decomp Text:FT3 @ 1ATM

Vapor Density:.07245LB/

Solubility in Water:@68F BUNSEN C=.01557

Appearance and Odor:CLEAR, COLORLESS, ODORLESS LIQUID.

==== Stability and Rea

ctivity Data =====

Stability Indicator/Materials to Avoid: YES

NONE

Hazardous Decomposition Products: NONE

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