

LIQUID AIR CORP CALIFORNIA PLZ -- LIQUID OXYGEN -- 6830-00-808-9531

===== Product Identification =====

Product ID:LIQUID OXYGEN

MSDS Date:10/01/1985

FSC:6830

NIIN:00-808-9531

MSDS Number: BQFBF

=== Responsible Party ===

Company Name:LIQUID AIR CORP CALIFORNIA PLZ

Address:2121 N CALIFORNIA BLVD

City:WALNUT CREEK

State:CA

ZIP:94596

Country:US

Info Phone Num:510-977-6500 / FAX 510-977-6747

Emergency

Phone Num:510-977-6500

CAGE:18260

=== Contractor Identification ===

Company Name:LIQUID AIR CORP ONE CALIFORNIA PLAZA

Address:2121 N. CALIFORNIA BLVD

Box:City:WALNUT CREEK

State:CA

ZIP:94596

Country:US

Phone:415-977-6500

CAGE:18260

===== Composition/Information on Ingredients =====

Ingred Name:OXYGEN

CAS:7782-44-7

RTECS #:RS2060000

Other REC Limits:NONE RECOMMENDED

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

Routes of Entry: Inhalation:YES Skin:Y

ES Ingestion:NO

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

Health Hazards Acute and Chronic:BREATHING HIGH CONCENTRATIONS (GREATER THAN 75 MOLAR PERCENT) CAUSES SYMPTOMS OF HYPEROXIA WHICH INCLUDE CRAMPS, NAUSEA, DIZZINESS, HYPOTHERMIA, AMBYLOPIA, RESPIRATORY DIFFICULTIES, BRADYCARDIA, FAINT ING SPELLS AND CONVULSIONS CAPABLE OF LEADING TO DEATH.

Explanation of Carcinogenicity:THIS COMPOUND CONTAINS NO INGREDIENTS AT CONCENTRATIONS OF 0.1% OR GREATER THAT ARE CARCINOGENS OR SUSPECT CARCINOGENS.

Effects of Overexposure:CONTACT WITH THE CRYOGENIC LIQUID OR COLD PIPING CONTAINING THE LIQUID CAN CAUSE TISSUE FREEZING OR FROSTBITE ON DERMAL CONTACT OR IF SPLASHED IN THE EYES. FROSTBITE EFFECTS ARE A CHANGE IN COLOR OF THE SKIN TO GRAY OR WHITE POSSIBLY FOLLOWED BY BLISTERING.

Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

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

First Aid:CONSCIOUS PERSONS SHOULD BE ASSISTED TO AN UNCONTAMINATED AREA & BREATHE FRESH AIR. THEY SHOULD BE KEPT WARM & QUIET. INFORM THE PHYSICIAN THAT VICTIM IS EXPERIRNCING HYPEROXIA. UNCONSCIOUS PERSONS SH OULD BE MOVED TO UNCONTAMINATED AREA & GIVE ASSISTED RESPIRATION. FOR DERMAL CONTACT, FLUSH AFFECTED AREA WITH LUKE WARM WATER. DONOT USE HOT WATER. SEE PHYSICIAN PROMPTLY.

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

Extinguishing Media:COPIOUS QUANTITIES OF WATER FOR FIRES WITH OXYGEN AS THE OXIDIZER.

Fire Fighting Procedures:IF POSSIBLE, STOP THE FLOW OF OXYGEN WHICH IS SUPPORTING THE FIRE.

Unusual Fire/Explosion Hazard:VIGOROUSLY ACCELERATES COMBUSTION.

===== Accidental Release Measures =====

Spill Release Procedures:LIQUID OXYGEN IS DELIVERED TO A CUSTOMER INTO STATIONARY VACUUM-JACKETED VESSELS AT THE CUSTOMER'S LOCATION OR IN PORTABLE VACUUM-JACKETED "LIQUID" CYLINDERS. STATIONARY CUSTOMER-SITE VESSELS S

HOULD BE OPERATED IN ACCORDANCE WITH INSTRUCTIONS.

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

Handling and Storage Precautions:LIQUID OXYGEN CYLINDERS SHOULD BE USED ONLY IN WELL VENTILATED AREAS IN ACCORDANCE IWTH THE MANUFACTURERS & LIQUID AIR CORPORATIONS INSTRUCTIONS.

Other Precautions:THESE CYLINDERS MUST ALWAYS BE KEPT IN AN UPRIGHT POSITION. SPECIALIZED HAND TRUCKS ARE NEEDED FOR THEIR MOVEMENT. FULL AND EMPTY CYLINDERS SHOULD BE STORED AWAY FROM OTHER FLAMMABLE PRODUCTS.

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

Ventilation:LOCAL EXHAUST TO PRVENT ACCUMULATION ABOVE 25 MOLAR PERCENT.

Protective Gloves:LOOSE FITTING, INSULATED.

Eye Protection:SAFETY GLASSES OR GOGGLES + FACE SHIELD.

Other Protective Equipment:HAVE EMERGENCY EYE WASH AND SAFETY SHOWER AVAILABLE.

Work Hygienic Practices:WASH THOROUGHLY AFTER HANDLING AND BEFORE EATING, DRINKING OR SMOKING.

Supplemental Safety and Health
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UID OXYGEN CAN NOT BE HANDLED IN CARBON OR LOW ALLOY STEEL. EQUIPMENT TO CONTAIN LIQUID OXYGEN MUST BE "CLEANED FOR OXYGEN SERVICE". SHIPMENT OF A COMPRESSED GAS CONATINER WHICH HAS NOT BEEN FILLED BY THE OWNER OR WITH HIS WRITTEN CONSENT IS A VIOLATION OF FEDERAL LAW (49CFR).

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

HCC:D1

Boiling Pt:B.P. Text:-297F,-183C

Melt/Freeze Pt:M.P/F.P Text:-361F,-218C

Vapor Density:1.068

Spec Gravity:0.0828

Solubility in

Water:0.0310

Appearance and Odor:CLEAR, PALE BLUE, ODORLESS LIQUID.

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

ALL FLAMMABLE MATERIAL.

Stability Condition to Avoid:HIGH HEAT, OPEN FLAMES AND OTHER SOURCES
OF IGNITION.

Hazardous Decomposition Products:NONE.

===== Disposal Considerations =====

Waste Disposal Methods:DISPOSAL MUST BE MADE IN ACCORDANCE WITH
APPLICABLE FEDERAL, STATE AND L
OCAL REGULATIONS.

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