

AIR PRODUCTS AND CHEMICALS, INC. -- OXYGEN, LOX (LIQUID ONLY) GOX (GAS ONLY) --  
6830-00-169-0805

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

Product ID:OXYGEN, LOX (LIQUID ONLY) GOX (GAS ONLY)

MSDS Date:11/18/1987

FSC:6830

NIIN:00-169-0805

MSDS Number: BHDBG

=== Responsible Party ===

Company Name:AIR PRODUCTS AND CHEMICALS, INC.

Address:2043 S 35TH ST

Box:11393

City:ALLENTOWN

State:PA

ZIP:18195

Country:US

Info Phone Num:215-481-8257

Emergency Phone Num:1-800-523-9374 IN PA:1-800-322-9092

CAGE:00742

=== Contractor Identification ===

Company Name:AIR PRODUCTS AND CHEMICALS INC

Address:7201 HAMILTON BLVD

Box:City:ALLENTOWN

State:PA

ZIP:18195-1501

Country:US

Phone:800-345-3148/ 800-752-1597

CAGE:00742

Company Name:OXYGEN SALES AND SERVICE INC

Address:2043 S 35TH ST

Box:11393

City:TACOMA

State:WA

ZIP:98411-0393

Country:US

CAGE:5H199

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

Ingred Name:OXYGEN, LOX (LIQUID ONLY), GOX (GAS ONLY)

CAS:7782-44-7

RTECS #:RS2060000

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

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES

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

Health Hazards Acute and Chronic:BREATHING PURE OXYGEN AT ONE ATMOS,MAY PRODUCE COUGH & CHEST PAINS W/IN 8-24 HOURS.CONCENTRATIONS OF 60% MAY PRODUCE THESE SYMPTOMS IN SEVERAL DAYS.AT TWO ATMOS SYMPTOMS OCCUR IN 2-3 HRS.

PARTIAL PRESSURE OF OXY IN EXCESS OF TWO ATMOS

MAY PRODUCE A VARIETY OF CENTRAL NERVOUS SYS MANIFESTATIONS.

Effects of Overexposure:LIQUID OXYGEN OR COLD GAS WILL FREEZE TISSUES & CAN CAUSE SEVERE CRYOGENIC (EXTREMELY LOW TEMPERATURE)BURNS.

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

First Aid:IF CRYOGENIC LIQUID OR COLD BOIL-OFF GAS CONTACTS A WORKER'S SKIN OR EYES,FROZEN TISSUES SHOULD BE FLOODED OR SOAKED W/TEPID WATER(105-115F;41-46C).DO NOT USE H

OT WATER.BURNS WHICH RESULT IN

BLISTERING OR DEEPER TISSUE FREEZING SHOULD BE SEEN PROMPTLY BY A PHYSICIAN.

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

Flash Point:NA

Lower Limits:NA

Upper Limits:NA

Extinguishing Media:NA

Fire Fighting Procedures:OXYGEN IS NONFLAMMABLE,BUT SUPPORTS & VIGOROUSLY ACCELERATES COMBUSTION OF FLAMMABLES.TO FIGHT FIRES,SHUT OFF SOURCES OF OXYGEN & FIGHT LIKE CONVENTIONAL FIRE.

Unusual Fire/Explosion Hazard:OXYGEN IS NONFLAMMABLE,BUT SUPPORTS &

VIGOROUSLY ACCELERATES COMBUSTION OF FLAMMABLES.SOME MTRLS WHICH ARE NONCOMBUSTIBLE IN AIR WILL BURN IN PRESENCE OF OXY.

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

Spill Release Procedures:PREVENT LIQ OXY FROM CONTACTING

GREASE,OIL,ASPHALT OR COMBUSTIBLES.VENTILATE AREA TO EVAP & DISPERSE OXY.FLUSH AREA W/LARGE QTY'S OF WTR.DO NOT ENTER AREAS OF HIGH OXYGEN CONCENTRATION,WHICH CAN SATURATE CLOTHING & INCREASE ITS FLAMMABILITY.

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

Handling and Storage Precautions:USE/STORE IN WELL VENT AREA.DO NOT  
DRAG,ROLL OR SLIDE.USE SUITABLE HAND TRUCK.KEEP CYLS AWAY FROM  
SOURCES OF HEAT.SEGREGATE FULL/EMPTY CYLS.

Other Precautions:OXYGEN IS NOT TO BE USED AS A SUBSTITUTE FOR  
COMPRESSED AIR.APPLICATIONS SUCH ASCLEANING,DUSTIN,POWERING  
PNEUMATIC TOOLS,ETC.,ARE NOT SAFE DUE TO LUBRICATING OILS & OTHER  
MATERIALS PRESENT.USE ONLY W/ EQUIP SPEC DESIGN  
ED & CLEANED FOR OXY  
SV

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

Respiratory Protection:NA  
Ventilation:YES  
Protective Gloves:LOOSE-FITTING GLOVES SUCH AS LEATHER  
Eye Protection:CHEMICAL GOGGLES/SAFETY GLASSES  
Other Protective Equipment:NA  
Supplemental Safety and Health  
NK

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

HCC:G4  
Boiling Pt:B.P. Text:-297.3F \*  
Vapor Pres:NA  
Vapor Density:@68F 20C\*  
Spec Gravity:@BOILING POINT\*  
Solubility in Wate  
r:@77F 25C \*  
Appearance and Odor:GASEOUS OXYGEN IS COLORLESS & ODORLESS.LIQUID  
OXYGEN IS PALE BLUE & ODORLESS

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

Stability Indicator/Materials to Avoid:YES  
ALL FLAMMABLES,ESPECIALLY PETROLEUM PRODUCTS,ASPHALT,OTHER VOLATILE  
FLAMMABLES.  
Stability Condition to Avoid:MATERIALS WHICH BURN IN AIR WILL BURN  
VIOLENTLY IN ATMOS RICHER THAN APPROX 25% OXYGEN.  
Hazardous Decomposition Products:NONE

===== Dispos

al Considerations =====

Waste Disposal Methods:ALLOW LIQ OXY TO EVAP IN A WELL VENT OUTDOOR AREA.VENT OXY GAS TO OUTSIDE LOCATION.DISPOSAL SITE SHOULD BE REMOTE FROM WORK AREAS,OPEN FLAMES OR SOURCES OF IGNITION & COMBUSTIBLES.FLUSHING W/WTR WILL INCREASE THE VAPORIZATION RATE OF THE LIQUID.

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