

AIR PRODUCTS AND CHEMICALS, INC. -- NITROGEN OR LIN (IN CRYOGENIC LIQUID STATE) --
6830-00-285-4769

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

Product ID:NITROGEN OR LIN (IN CRYOGENIC LIQUID STATE)

MSDS Date:08/27/1987

FSC:6830

NIIN:00-285-4769

MSDS Number: BHDHB

=== Responsible Party ===

Company Name:AIR PRODUCTS AND CHEMICALS, INC.

Address:2043 S 35TH ST

Box:538

City:ALLENTOWN

State:PA

ZIP:18195

Countr

y:US

Info Phone Num:215-481-4911

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

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

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Ingred Name:NITROGEN
CAS:7727-37-9
RTECS #:QW9700000
ACGIH TLV:ASPHYXIAN; 9192

===== 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:AT LOW OXYGEN CONCENTRATIONS
UNCONSCIOUSNESS & DEATH MAY OCCUR IN SECONDS W/OUT WARNING.
EXTENSIVE TISSUE DAMAGE OR BURNS CAN RESULT FROM EXPOSURE TO LIQUID
NITROGEN OR COLD NITROGEN V

APORS.

Explanation of Carcinogenicity:NITROGEN IS A SIMPLE ASPHYXIAN AND HAS
NO THRESHOLD LIMIT VALUE.

Effects of Overexposure:OYXGEN DEFICIENT ATMOSPHERES MAY PRODUCE
DIZZINESS, NAUSEA, VOMITING, LOSS OF CONSCIOUSNESS AND DEATH.
NITROGEN UNDER HIGH PRESSURE CAN PRODUCE NARCOSIS EVEN THOUGH
OXYGEN SUFFICIENT FOR LIFE IS PRE SENT.

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

First Aid:ASSISTED RESPIRATION/SUPPLEMENTAL OXYGEN SHOULD BE GIVEN IF
THE
VICTIM IS NOT BREATHING. IF CRYOGENIC LIQ./COLD BOIL OFF GAS
CONTACTS A WORKER'S SKIN OR EYES,FROZEN TISSUES SHOULD BE
FLOODED/SOAKED W/TEPID WATER. DO NOT USE HOT WATER!!CRYOGENIC
BURNS WHICH RESULTS IN BLISTERING/DEEPER TISSUE FREEZING SHOULD BE
SEEN PROMPTLY BY A PHYSICIAN. MOVE PERSON TO A AREA WITH NORMAL
ATMOSPHERES.

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

Flash Point:NA
Lower Limits:NA
Upper Limits:NA
Extinguishing Media:NA
Fire Fight

ing Procedures:NA
Unusual Fire/Explosion Hazard:NA

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

Spill Release Procedures:FLUSH LIQ NITROGEN SPILL W/WTR TO DISPERSE.
VENTL ENCLSD AREAS TO PREVENT FORMATION OF OXYGEN-DEFICIENT
ATMOSPHERES CAUSED BY THE EVAPORATION OF LIQ. NITROGEN OR THE
RELEASE OF GASEOUS NITROGEN. AVOID CONTACT OF SKIN W/LIQ
NITROGEN/COLD BOIL OFF GASES

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

Handling and Sto

rage Precautions:USE A SUITABLE HAND TRUCK. AVOID
DRAGGING,ROLLING,SLIDNG OF CYLINDR.STORE OUTSIDE & PIPED TO THE
USEPOINT. KEEP CYLINDERS AWAY FROM SOURCES OF HEAT.

Other Precautions:IF LIQ CYLINDERS ARE TO BE STORED/TRANSPORTED IN AN
ENCLOSED AREA,IT'S ESSENTIALTHAT THE AREA BE WELL VENTILATED.
SEGREGATE FULL & EMPTY CYLINDERS. AVOID USE OF CARBON STEEL &
OTHER MATERIALS WHICH BECOME BRITTLE AT LOW TEMPERATURES.

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

Respiratory Protection:USE SELF-CONTAINED BREATHING APPARATUS IN OXYGEN
DEFICIENT ATMOSPHERES. CAUTION!! RESPIRATORS WILL NOT
FUNCTION. USE MAY RESULT IN ASPHYXIATION.

Ventilation:VENTS SHOULD BE SITUATED TO AVOID HIGHER THAN NORMAL
CONCENTRATION OF NITROGEN IN WORK AREA.

Protective Gloves:LOOSE GLOVES/IMPERMEABLE MATL LEATHER

Eye Protection:CHEMICAL GOGGLES/SAFETY GLASSES

Other Protective Equipment:NONE

Supplemental Safety and Health

LIQUID NITROGEN IS STORED IN VACUUM

INSULATED CONTAINERS MEETING DOT

SPECIFICATIONS OR ASME CODES. IF OXYGEN DEFICIENT
ATMOSPHERES ARE SUSPECTED OR CAN OCCUR, USE OXYGEN MONITORING
EQUIPME NT TO TEST FOR OXYGEN DEFICIENTATMOSPHERES.

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

Boiling Pt:B.P. Text:-320.5F

Melt/Freeze Pt:M.P/F.P Text:NA

Vapor Pres:NA

Vapor Density:0.07273

Spec Gravity:1 ATM 0.808

Solubility in Water:1ATM 1.52% BY VOLUME

Appearance and Odor:BOTH LIQUID AND GASEOUS NITROGEN

ARE COLORLESS AND
ODORLESS.

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

Stability Indicator/Materials to Avoid: YES
NONE
Stability Condition to Avoid: NONE
Hazardous Decomposition Products: NONE

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

Waste Disposal Methods: ALLOW LIQ NITROGEN TO EVAPORATE IN A WELL VENTL
OUTDOOR LOCATION REMOTE FROM WORK AREA. DO NOT ATTEMPT TO
DISPOSE OF RESIDUAL NITROGEN IN COMPRESSED GAS CYLINDERS.

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