

AIR PRODUCTS AND CHEMICALS, INC. -- HELIUM -- 6830-00-660-0026

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

Product ID:HELIUM

MSDS Date:02/16/1981

FSC:6830

NIIN:00-660-0026

MSDS Number: BHDSB

=== Responsible Party ===

Company Name:AIR PRODUCTS AND CHEMICALS, INC.

Box:538

City:ALLENTOWN

State:PA

ZIP:18105

Country:US

Info Phone Num:215-481-4911

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

CAGE:0074

2

=== 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:FIRE KING OF SEATTLE

CAGE:6X786

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:NO HAZARDOUS INGREDIENT

=====

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

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:HELIUM IS ODORLESS/NONTOXIC, BUT MAY
PRODUCE SUFFOCATION BY DILUTING THE CONCENTRATION OF OXYGEN IN AIR
BELOW LEVELS NECESSARY TO SUPPORT LIFE. PERSONEL/RESCUEWORKERS
SHOULD NOT ENTER AREAS WHERE THE OXYGEN CONCENTRATION IS BELOW
19%UNLESS PROVIDED WITH A SELF-CONTAINED BREATHING

APPARATUS/AIRLINE RESPIRATOR.

Effects of Overexposure:EXPOSURE TO OXYGEN-DEFICIENT ATMOSPHERES MAY
PRODUCE DIZZINESS/NAUSEA/VOMITING/ LOSS OF CONSCIOUSNESS/DEATH.
DEATH MAY RESULT FM ERRORS IN JUDGEMENT/CONFUSION/ LOSS OF
CONSCIOUSNESS WHICH PREV SELF RE SCUE. AT LOW OXY CONCENT
UNCONSCIOUSNESS& DEATH MAY OCCUR IN SEC'S W/O WARNING. EXTENSIVE
TISSUE DAMAGE/BURNS CAN RESULT

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

First Aid:PERSONS SUFFERING
FM LACK OF OXYGEN S/B MOVED TO AREAS
W/NORMAL ATMOSPHERE. SELFCONTAINED BREATHING APPARATUS MAY BE
REQUIRED TO PREV ASPHYXIATION OF RESCUE WORKERS.CPR/SUPP OXYGEN
S/B GIVEN IF THE VICTIM IS NOT BREATHING. IF CRYOGENICLIQ/COLD
BOIL-OFF GAS CONTACTS SKIN/EYES, FROZEN TISSUES S/B FLOODED/SOAKED
W/ TEPID WATER. CRYOGENIC BURNS WHICH RESULT IN BLISTERING/TISSUE
FREEZE-MED ATTN.

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

Spill Release Procedures:A
VOID CONTACT OF SKIN W/LIQUID HELIUM/COLD
BOILOFFGAS. FLUSH LIQ SPILL W/WATER. VENTILATE ENCLOSED AREAS TO
PREVENT FORMATION OF OXYGEN-DEFICIENT ATMOSPHERES CAUSED BY EVAP
OF LIQ HELIUM OR THE RELEASE OF GASEOUS HELIUM.

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

Handling and Storage Precautions:USE ONLY IN WELL VENTILATED AREAS.
AVOID DRAGGING/ROLLING/SLIDING CYL'S EVEN FOR SHORT DISTANCES.
STORE LIQUID CONTAINERS/CYL'S IN WELL VENT AREAS.

Other Precautions:UTILIZE OXYGEN COMPATIBLE INSULATING MATLS/MINIMIZE EXPOSED PIPING SUR AREAS. COMPRESSED GAS CYL'S S/N BE REFILLED EXCEPT BY QUALIFIED PRODUCERS OF COMPRESSED GASES. SHIPPING COMPRESSED GAS CYL W/O PERMISSION OF OWNER IS VIOLATION FED LAW.

===== 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:NATURAL/MECHANICAL WHERE GAS IS PRESENT. VENTS S/B SITUATED TO AVOID HIGHER THAN NORMAL CONCENT OF HELIUM IN WORK AREAS.

Protective Gloves:LOOSE FITTING LEATHER WORK GLOVES

Eye Protection:SAFETY GLASSES/CHEMICAL GOGGLES

Other Protective Equipment:NONE

Supplemental Safety and Health

NK

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

Boiling Pt:B.P. Text:-452.1F

Vapor Density:0.01114@0C

Spec Gravity:0.138 AIR=1 @32F

Solubility in Water:0.861% BY VOL

@ 68F

Appearance and Odor:HELIUM IS COLORLESS AND ODORLESS IN BOTH THE GASEOUS AND LIQUID STATES.

===== 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 HELIUM TO EVAP IN A WELL VENTED LOCATION. VENT HELIUM GAS SLOWLY TO WELL VENTED OUTDOOR LOCALITY. DO NOT

ATTEMPT TO DISPOSE OF RESIDUAL HELIUM IN COMPRESSED GAS CYL'S.
RETURN CYL'S TO AIR PRODUCTS W/RESIDUAL PRESS/VALVE TIGHTLY
CLOSED/CAP IN PLACE

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 this information to be accurate and
disclaims all liability for its use. Any person utilizing this

document should seek competent professional advice to verify and
assume responsibility for the suitability of this information to their
particular situation.