

AIR PRODUCTS AND CHEMICALS, INC. -- HELIUM -- 6830-00-169-0789

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

Product ID:HELIUM

MSDS Date:07/10/1986

FSC:6830

NIIN:00-169-0789

MSDS Number: BHCZP

=== Responsible Party ===

Company Name:AIR PRODUCTS AND CHEMICALS, INC.

Address:NA

Box:538

City:ALLENTOWN

State:PA

ZIP:18195

Country:US

Info Phone Num:215-481-4911

Emergency Phone Num:1-800-523-9374 IN PA:1-800-322-90

92

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:HELIUM

(FORMULA HE MW:4.003)

CAS:7440-59-7

RTECS #

:NH6520000

=====  
===== 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:PERSONNEL, INCLUDING RESCUE WORKERS,  
SHOULD NOT ENTER AREAS WHERE THE OXYGEN CONCENTRATION IS BELOW  
19%, UNLESS PROVIDED W/SELFCONTAINED BREATHING APPARATUS OR AIRLINE  
RESPIRATOR.

Explanation of Carcinogenicity:HELIUM IS A SIMPLE ASPHYXIANT AND HAS NO  
TLV

Effects of Overexposure:EXPOSURE TO OXYGEN DEFICIENT ATMOSPHERES MAY  
PRODUCE DIZZINESS,NAUSEA,VOMITING, LOSS OF CONSCIOUSNESS, AND  
DEATH. EXTENSIVE TISSUE DAMAGE OR BURNS CAN RESULT FROM EXPOSURE  
TO LIQUID HELIUM OR COLD HELIUM VAPORS.

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

First Aid:PERSONS SUFFERING FROM LACK OF OXYGEN SHOULD BE MOVED TO  
AREAS WITH NORMAL ATMOSPHERES. ASSISTED RESPIRATION & SUPPLEMENTAL  
OXYGEN SHOULD BE GIVEN IF VICTIM IS NOT BREATHING. IF CRYOGENIC

LIQUID OR COLD BOIL OFF GAS CONTACTS WORKER'S SKIN OR EYES, FROZEN  
TISSUES SHOULD BE FLOODED/SOAKED W/TEPID WATER(105-115F;41-46C) DO  
NOT USE HOT WATER!! SHOULD SEEK MEDICAL ATTENTION IMMEDIATELY.

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

Flash Point:NA

Lower Limits:NA

Upper Limits:NA

Extinguishing Media:NA

Fire Fighting Procedures:NA

Unusual Fire/Explosion Hazard:NA

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

Spill Release Procedures:AVOID CONTACT OF SKIN W/LIQUID HELIUM OR ITS  
COLD BOIL OFF GAS. FLUSH LIQ SPILL W/WTR TO DISPERSE. VENTILATE  
ENCLOSED AREAS TO PREVENT FORMATION OF OXYGEN DEFICIENT  
ATMOSPHERES CAUSED BY EVAPORATION OF LIQUID HELIUM OR THE RELEASE  
OF GASEOUS HELIUM.

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

Handling and Storage Precautions:PREVENT CONTACT OF LIQ HELIUM/COLD  
BOILOFF GAS W/ SKIN.USE A SUITABLE HANDTRUCK.STORE LIQ CO

NTNR &

CYLINDER IN WELL VENTL AREA.KEEP FROM SOURCES HEAT

Other Precautions:STORAGE SHOULD NOT BE A HEAVY TRAFFICKED AREA.

SEGREGATE FULL & EMPTY CYLINDERS.AVOID EXPOSURE TO AREAS WHERE SALT OR CORROSIVE CHEMICAL ARE PRESENT. STORAGE SHOULD BE FREE OF COMBUSTIBLE MATERIAL.A VOID ROLLING,DRAGGING,OR SLIDING CYLNDR.

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

Respiratory Protection:SELFCONTAINED BREATHING APPARATUS IN OXYGEN DEFICIENT ATMOSPHERES. CA

UTION!! RESPIRATORS WILL NOT FUNCTION.

USE MAY RESULT IN ASPHYXIATION.

Ventilation:NATURAL OR MECHANICAL WHERE GAS IS PRESENT. VENTS SHOULD BE SITUATED TO AVOID HIGHER THAN NORML CONCENTRATION OF HELIUM

Protective Gloves:LOOSE FITTING OF IMPERMEABLE AS LEATHER

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 Pres:NA

Vapo

r Density:0.01114

Spec Gravity:1 ATM 0.138

Solubility in Water:1ATM0.861% BY VOLUME

Appearance and Odor:HELIUM IS COLORLESS & ODORLESS IN BOTH GASEOUS & 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 LIQUID HELIUM TO EVAPORATE IN A WELL

VENTILATED LOCATION REMOTE FROM WORK AREAS. DO NOT ATTEMPT TO DISPOSE RESIDUAL HELIUM IN COMPRESSED GAS CYLINDERS. VENT HELIUM GAS SLOWLY TO A WELL VENTILATED OUTDOORS LOCATION REMOTE FROM WORK AREAS.

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.