

US BUREAU OF MINES, HELIUM OPNS -- HELIUM -- 6830-00-660-0027

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

Product ID:HELIUM

MSDS Date:07/14/1993

FSC:6830

NIIN:00-660-0027

MSDS Number: CCMJD

=== Responsible Party ===

Company Name:US BUREAU OF MINES, HELIUM OPNS

Address:1100 S FILLMORE ST

City:AMARILLO

State:TX

ZIP:79101-4318

Country:US

Info Phone Num:806-376-2638

Emergency Phone Num:806-376-2638

CAGE:0JBD1

=== Contractor Identification ===

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

Ingred Name:HELIUM

CAS:7440-59-7

RTECS #:MH6520000

Fraction by Wt: >99%

Other REC Limits:NONE RECOMMENDED

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

LD50 LC50 Mixture:NOT GIVEN

Routes of Entry: Inhalation:YES S

kin:YES Ingestion:NO

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

Health Hazards Acute and Chronic:NON-TOXIC. SIMPLE ASPHYXIANT. IN

CLOSED AREAS NON-FLAMMABLE GAS CAN DISPLACE OXYGEN. IF ATMOSPHERIC OXYGEN CONTENT DROPS BELOW 18% ASPHYXIATION CAN OCCUR. CONTACT WITH LIQUID OR COLD GAS PRODUCED CAN CAUSE FREEZE BURNS.

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

Effects of Overexposure:SYMPTOMS CAN INCLUDE FROSTBITE, PANTING, GASPING, FAST PULSE, CLUMSINESS, BLUISH FINGERNAILS AND/OR LIPS, CONFUSION, DIZZINESS, FATIGUE, NAUSEA, VOMITING, COLLAPSE AND CONVULSIONS.

Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

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

First Aid:INHALATION- (CAUTION! RESCUERS MUST SEE TO THEIR OWN SAFETY. USE SELF-CONTAINED BREATHING EQUIPMENT TO ENTER AREAS OF LOW OXYG

EN.) REMOVE VICTIM TO FRESH AIR. QUICKLY RESTORE OR SUPPORT BREATHING AS NEEDED. GIVE OXYGEN IF AVAILABLE. GET MEDICAL ATTENTION FOR VICTIM. SKIN/EYES-PROMPTLY FLUSH AREA WITH LUKEWARM WATER. DO NOT APPLY HEAT. APPLY LOOSE, DRY, STERILE DRESSING. GET MEDICAL ATTENTION.

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

Flash Point:NONFLAMMABLE

Lower Limits:NOT GIVEN

Upper Limits:NOT GIVEN

Extinguishing Media:USE EXTINGUISHERS SUITED TO SURROUNDING FIRE.

Fire

Fighting Procedures:FIRE FIGHTERS SHOULD WEAR SELF CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. COOL TANKS AND CONTAINERS EXPOSED TO FIRE WITH WATER.

Unusual Fire/Explosion Hazard:DEWARS MAY BURST WHEN HEATED.

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

Spill Release Procedures:CLEAR PEOPLE FORM AREA UNTIL A SAFE OXYGEN LEVEL CAN BE ASSURED. NOTIFY SAFETY PERSONNEL IMMEDIATELY. EMERGENCY WORKERS NEED SELF-CONTAINED BREATHING APPARATUS. PAINT

SOAP SOLUTION AROUND SUSPECTED LEAK TO SEE IF BUBBLES FORM,  
INDICATING A LEAK.

Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions: STORE IN A COOL, DRY, WELL-VENTILATED  
AREA WITH LOW RISK OF FIRE AND AWAY FROM COMBUSTIBLE OR CORROSIVE  
CHEMICALS.

Other Precautions: PROTECT CONTAINERS FROM PHYSICAL DAMAGE AND FROM HEAT  
OVER 125F. COVER VALVE WITH CAP WHEN NOT IN USE. PROTECT COMP  
RESSED  
GAS CYLINDERS AGAINST FALLING, BUMPING OR SUDDEN BLOWS. WEAR SAFETY  
SHOES WHEN HANDLING COMPRESSED GAS CYLINDERS.

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

Respiratory Protection: PROVIDE AIR-SUPPLIED OR SELF-CONTAINED BREATHING  
EQUIPMENT FOR WORKERS IN EMERGENCY OR NON-ROUTINE SITUATIONS WHERE  
OXYGEN LEVEL IS UNSAFE. USE A SAFETY LINE AND A STAND-BY WORKER  
WHEN A WORKER WITH A RESPIRATOR MUST ENTER AN EMERGENCY AREA

Ventilation: MAINTAIN AT  
LEAST 19% OXYGEN IN AIR.

Protective Gloves: NONE NORMALLY REQUIRED.

Eye Protection: NONE NORMALLY REQUIRED.

Other Protective Equipment: SAFETY SHOES ARE RECOMMENDED FOR HANDLING  
GAS CYLINDERS.

Work Hygienic Practices: WASH HANDS THOROUGHLY WITH SOAP AND WATER  
BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES.

Supplemental Safety and Health

CHECK FOR LEAKS IN COMPRESSED GAS EQUIPMENT BEFORE USE IN CONFINED  
SPACES.

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

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HCC: G3

Boiling Pt: B.P. Text: -452F, -269C

Melt/Freeze Pt: M.P/F.P Text: -458F, -272C

Decomp Temp: Decomp Text: NOT GIVEN

Vapor Pres: NOT GIVEN

Vapor Density: 0.138

Spec Gravity: NOT GIVEN

Evaporation Rate & Reference: GAS

Solubility in Water: NOT GIVEN

Appearance and Odor: COLORLESS, ODORLESS CRYOGENIC LIQUID

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

Stability Indicator/Materials to Avoid: YES  
CARBON STEEL

Stability Condition to Avoid: MOISTURE

Hazardous Decomposition Prod

ucts:NONE SPECIFIED BY MANUFACTURER.

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

Waste Disposal Methods:MOVE LEAKING CYLINDER OUTDOORS OR TO AN EXHAUST HOOD WITH GOOD FORCED VENTILATION. ALLOW GAS O VENT AT A MODERATE RATE. TAG CYLINDER AS DEFECTIVE AND MARK DEFECT. WHEN EMPTY CLOSE VALVE AND RETURN TO SUPPLIER. FOLLOW ALL STATE AND LOCAL REGULATIONS.

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