HELIUM

MSDS Number

BHBTN

National Stock Number

6830-00-660-0026

Product Name

HELIUM

Manufacturer

AIR PRODUCTS AND CHEMICALS INC

Product Identification

Product ID:HELIUM
MSDS Date:06/13/1988
FSC:6830
NIIN:00-660-0026
MSDS Number: BHBTN

Responsible Party

AIR PRODUCTS AND CHEMICALS, INC.

ALLENTOWN , PA 18195

US

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

Info Phone: 215-481-4911

Cage: 00742

Contractor

AIR PRODUCTS AND CHEMICALS INC

ALLENTOWN, PA 18195-1501

US

800-345-3148/ 800-752-1597

Cage: 00742

Ingredients

4.003)

CAS: 7440-59-7

RTECS: NH6520000

Hazards

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:HELIUM IS ODORLESS AND NONTOXIC BUT MAY PRODUCE SUFFOCATION BY DILUTING THE CONCENTRATION OF OXYGEN IN AIR BELOW LEVELS NECESSARY TO SUPPORT LIFE. EXTENSIVE TISSUSE DAMAGE OR BURNS CAN RESULT FROM EXP OSURE TO LIQUID HELIUM OR COLD HELIUM VAPORS.
Explanation of Carcinogenicity:HELIUM IS A SIMPLE ASPHYXIANT AND HAS NO TRESHOLD LIMIT VALUE (TLV). HELIUM NOT LISTED AS CARCINOGEN BY NTP/IARC/OSHA.
Effects of Overexposure:DIZZINESS/NAUSEA/VOMITING/LOSS OF CONSCIOUSNESS. DEATH MAY RESULT FROM ERRORS IN JUDGEMENT, CONFUSION, OR LOSS OF CONSCIOUSNESS WHICH PREVENTS SELF-RESCUE. AT LOW OXYGEN CONCENTRATIONS UNCONSCIOUSNESS AND DEATH MAY OCCUR IN SECONDS WITHOUTWARNING.

First Aid

First Aid:ASSISTED RESPIRATION AND SUPPLEMENTAL OXYGEN SHOULD BE GIVEN IF THE VICTIM IS NOT BREATHING. IF CRYOGENIC LIQUID OR COLD BOIL-OFF GAS CONTACTS A WORKERS SKIN OR EYES, FROZEN TISSUES SHOULD BE FLOODED OR SOAKED WITH TEPID WATER (105-115F; 41-46C) DO NOT USE HOT WATER. CRYOGENIC BURNS WHICH RESULT IN BLISTERING OR DEEPER TISSUE FREEZING SHOULD BE SEEN PROMPTLY BY A PHYSICIAN.

Fire Fighting

Flash Point:NONE LISTED
Lower Limits:NONE LISTED
Upper Limits:NONE LISTED

Accidental Release

Spill Release Procedures:AVOID CONTACT OF SKIN WITH LIQUID HELIUM OR ITS COLD BOIL-OFF GAS. FLUSH LIQUID SPILL WITH WATER TO DISPERSE. VENTILATE ENCLOSED AREAS TO PREVENT FORMATION OF OXYGEN-DEFICIENT ATMOSPHERES CAUSED BY EV APORAT OF LIQ HELIUM OR RELEASE OF GASEOUS HELIUM.

Handling

Handling and Storage Precautions:PREVENT ENTRAPMENT OF LIQUID IN CLOSED SYSTEMS. USE IN WELL VENTED AREAS. AVOID EXPOSURE TO AREAS WHERE SALT OR CORROSIVE CHEMICALS ARE PRESENT.
Other Precautions:LIQUID HELIUM IN EXPOSED PIPING CAN CAUSE AIR TO CONDENSE AND LIQUEFY. UTILIZE OXYGEN-COMPATIBLE INSULATING MATERIALS AND MINIMIZE EXPOSED PIPING AREAS. AVOID USE OF CARBON STEEL AND OTHER METAL WHICH BECOME BRITTLE AT LOW TEMPERATURES.

Exposure Controls

Respiratory Protection:USE SELF-CONTAINED BREATHING APPARATUS IN OXYGEN-DEFICIENT ATMOSPHERES. CAUTION:AIR PURIFYING RESPIRATORS WILL NOT FUNCTION. THEIR USE MAY RESULTS IN ASPHYXIATION.
Ventilation:NATURAL OR MECHANICAL WHERE GAS IS PRESENT.
Protective Gloves:LEATHER IS RECOMMENDED.
Eye Protection:SAFETY GLASSES-SEE BELOW.
Other Protective Equipment:NONE
Supplemental Safety and Health
EYE-SAFETY GLASSES ARE RECOMMENDED WHEN HANDLING HIGH-PRESSURE CYLINDERS. USE CHEMICAL GOGGLES OR A FACESHIELD WITH SAFETY GLASSES WHEN HANDLING LIQUID. VENTILATION-VENTS SHOULD BE SITUATED TO AVOID H IGHER THAN NORMAL CONCENTRATION OF HELIUM IN WORK AREAS.

Chemical Properties

Boiling Pt:B.P. Text:-452F/-268C
Vapor Density:32F0.01114
Spec Gravity:23F(OC)1ATM 138
Solubility in Water:68F(20C)1 ATM 0.861%
Appearance and Odor:HELIUM IS COLORLESS AND ODORLESS IN BOTH GASEOUS AND LIQUID STATES.

Stability

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

Disposal

Waste Disposal Methods:ALLOW LIQUID HELIUM TO EVAP IN A WELL-VENT LOCATION REMOTE FROM WORK AREAS. VENT HELIUM GAS SLOWLY TO A WELL-VENT OUTDOOR LOCATION REMOTE FROM WORK AREA. DO NOT ATTEMPT TO DISPOSE OF RESIDUAL HELIUM I N COMPRESSED GAS CYLINDERS.

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