

PRAXAIR INC -- HELIUM -- 6830-00-660-0026

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

Product ID:HELIUM  
MSDS Date:10/01/1997  
FSC:6830  
NIIN:00-660-0026  
Status Code:A  
MSDS Number: CLRGW  
=== Responsible Party ===  
Company Name:PRAXAIR INC  
Address:39 OLD RIDGEBURY RD  
City:DANBURY  
State:CT  
ZIP:06810-5113  
Country:US  
Info Phone Num:1-800-PRAXAIR  
Emergency Phone Num:800-645-4633  
Resp. Party Other MSDS Num.:P-4602-E

Preparer's Name:NOT PROVIDED  
Chemtec Ind/Phone:(800)424-9300  
CAGE:0LV01

==== Contractor Identification ====

Company Name:PRAXAIR, INC.  
Address:39 OLD RIDGEBURY RD  
Box:City:DANBURY  
State:CT  
ZIP:06810-5113  
Country:US  
Phone:800-772-9247; 800-PRAXAIR  
CAGE:0LV01

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

Ingred Name:HELIUM  
CAS:7440-59-7  
RTECS #:MH6520000  
> Wt:99.  
Other REC Limits:NOT PROVIDED  
OSHA PEL:NONE ESTABLISHED  
ACGIH TLV:SIMPLE ASPHYXIAN

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Hazards Identification =====

LD50 LC50 Mixture:NOT PROVIDED

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

Health Hazards Acute and Chronic:ACUTE: INHALATION: ASPHYXIAN. EFFECTS ARE DUE TO LACK OF OXYGEN. MODERATE CONCENTRATIONS MAY CAUSE HEADACHE, DROWSINESS, DIZZINESS, EXCITATION, EXCESS SALIVATION, VOMITING, AND UNCONSCIOUSNESS. LACK OF OXYGEN CAN KILL. SKIN CONTACT: NO HARM EXPECTED. EYE CONTACT: NO HARM EXPECTED. SWALLOWING: THIS PRODUCT IS A GA

S AT NORMAL TEMPERATURE AND

PRESSURE. CHRONIC: NO HARM EXPECTED. OTHER EFFECTS OF OVE  
REXPOSURE: HELIUM IS AN ASPHYXIAN. LACK OF OXYGEN CAN KILL.

Explanation of Carcinogenicity:HELIUM IS NOT LISTED BY NTP, OSHA, OR IARC.

Effects of Overexposure:NOT PROVIDED

Medical Cond Aggravated by Exposure:THE TOXICOLOGY AND THE PHYSICAL AND CHEMICAL PROPERTIES OF HELIUM SUGGEST THAT OVEREXPOSURE IS UNLIKELY TO AGGRAVATE MEDICAL CONDITIONS.

===== First Aid Measures ==  
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First Aid:INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, QUALIFIED PERSONNEL MAY GIVE OXYGEN. CALL A PHYSICIAN. SKIN: WASH WITH SOAP AND WATER. SWALLOW ING: THIS PRODUCT IS A GAS AT NORMAL TEMPERATURE AND PRESSURE. EYE: FLUSH EYES WITH WARM WATER. HOLD THE EYELIDS OPEN AND AWAY FROM THE EYEBALLS TO ENSURE THAT ALL SURFACES ARE FLUSHED THOROUGHLY. GE T MEDICAL ATTENTION IF DISCONFORT PERSISTS

NOTES TO PHYSICIAN: THERE IS NO SPECIFIC ANTEDOTE. THIS PRODUCT IS INERT. TREATMENT OF OVEREXPOSURE SHOULD BE DIRECTED AT THE CONTROL OF SYMPTOMS AND THE C LINICAL CONDITION OF THE PATIENT.

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

Flash Point:NOT APPLICABLE.

Extinguishing Media:HELIUM CANNOT CATCH FIRE. USE MEDIA APPROPRIATE FOR SURROUNDING FIRE.

Fire Fighting Procedures:CAUTION! HIGH-PRESSURE GAS. EVACUATE ALL PERSONNEL FROM DANGER AREA. IMME

DIATELY DELUGE CYLINDERS WITH WATER

FROM MAXIMUM DISTANCE UNTIL COOL, THEN MOVE THEM FROM FIRE IF WITHOUT RISK. SELF-CONTAINED BREATHING APPARATUS MAY BE REQUIRED BY RESCUE WORKERS. ON-SITE FIRE BRIGADES MUST COMPLY WITH OSHA 29 CFR 1910.156.

Unusual Fire/Explosion Hazard:HELIUM CANNOT CATCH FIRE. HEAT OF FIRE CAN BUILD PRESSURE IN CYLINDER AND CAUSE IT TO RUPTURE. NO PART OF CYLINDER SHOULD BE SUBJECTED TO A TEMPERATURE HIGHER THAN 125F(52C). HELIUM CYLINDERS ARE EQ

UI PPED WITH PRESSURE RELIEF

DEVICES. (EXCEPTIONS MAY EXIST WHERE AUTHORIZED BY DOT).

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

Spill Release Procedures:HIGH PRESSURE GAS. HELIUM IS AN ASPHYXIANT. LACK OF OXYGEN CAN KILL. EVACUATE ALL PERSONNEL FROM DANGER AREA. USE SELF-CONTAINED BREATHING APPARATUS WHERE NEEDED. SHUT OFF FLOW IF YOU CAN DO SO WITHOU T RISK. VENTILATE AREA OR MOVE CYLINDER TO A WELL-VENTILATED AREA. TEST FOR SUFFICIENT OXYGEN ESPE

CIALY IF IN

CONFINED SPACES, BEFORE ALLOWING REENTRY.

Neutralizing Agent:NOT RELEVANT

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

Handling and Storage Precautions:STORE AND USE WITH ADEQUATE VENTILATION. SECURE CYLINDERS TO PREVENT FALLING. STORE ONLY WHERE TEMPERATURE WILL NOT EXCEED 125F/52C. STORE FULL & EMPTY CYLINDERS SEPARATELY. USE FIRST-IN, FIRST-OUT I NVENTORY SYSTEM. SCREW VALVE PROTECTION CAP ON FIRMLY BY HAND.

Other Precautions:PROTECT

CYLINDERS FROM DAMAGE. USE SUITABLE HAND

TRUCK TO MOVE CYLINDERS. NEVER LIFT CYLINDER BY CAP. NEVER INSERT OBJECT INTO CAP OPENING. USE ADJUSTABLE STRAP-WRENCH TO OPEN/LOOSEN CAP. OPEN VALVE S LOWLY. NEVER APPLY FLAME OR HEAT TO CYLINDER.

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

Respiratory Protection:USE AIR-PURIFYING OR AIR-SUPPLIED RESPIRATORS, AS APPROPRIATE, WHERE LOCAL OR GENERAL EXHAUST IS INADEQUATE. ADEQUATE VENTILATION MUST KEEP WORKER E

XPOSURE BELOW APPLICABLE

TLVS FOR FUMES, GASES AND OTHER BY-PRODUCTS OF WELDING WITH HELIUM. AN AIR-SUPPLIED RESPIRATOR MUST BE USED IN CONFINED SPACES. RESPIRATORY PROTECTION MUST CONFORM TO OSHA RULES.

Ventilation:ADEQUATE VENTILATION MUST KEEP WORKER EXPOSURE BELOW APPLICABLE TLVS FOR FUMES, GASES AND OTHER BY-PRODUCTS OF WELDING WITH HELIUM.

Protective Gloves:WORK GLOVES FOR HANDLING; WELDING GLOVES FOR WELDING.

Eye Protection:WEAR SAFETY GLASSES FOR HANDLING; GOGGLES WITH FILTER

LENSES,SCREEN FOR WELDING

Other Protective Equipment:METATARSAL SHOES FOR CYLINDER HANDLING. AS NEEDED FOR WELDING, WEAR HEAD, HAND, AND BODY PROTECTION TO PREVENT INJURY FROM RADIATION AND SPARKS. AT A MINIMUM THIS INCLUDES WELDER'S GLOVES .

Work Hygienic Practices:REGARDLESS OF PROTECTIVE EQUIPMENT, NEVER TOUCH LIVE ELECTRICAL PARTS.

Supplemental Safety and Health

ABBREVIATION: N/A = NOT APPLICABLE. N/AV = NOT AVAILABLE. N/K = UNKNOWN. N/P = NOT PROVIDED. N/R = NOT RELEVANT. N/D = NOT DETERMINED. N/E = NOT ESTABLISHED.

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

HCC:G3

NRC/State Lic Num:NOT RELEVANT

Boiling Pt:=-157.8C, -252.1F

Melt/Freeze Pt:M.P/F.P Text:NONE

Decomp Temp:Decomp Text:NOT PROVIDED

Vapor Density:0.138

Spec Gravity:GAS

Solubility in Water:0.0094

Appearance and Odor:COLORLESS, ODORLESS, TASTELESS GAS AT NORMAL TEMPERATURE AND PRESSURE.

Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES

NONE CURRENTLY KNOWN. HELIUM IS CHEMICALLY INERT.

Stability Condition to Avoid:NONE CURRENTLY KNOWN.

Hazardous Decomposition Products:NO DATA PROVIDED BY RESPONSIBLE PARTY.

===== Toxicological Information =====

Toxicological Information:HELIUM IS A SIMPLE ASPHYXIANT.

===== Ecological Information =====

Ecological:NOT PROVIDED

===== Disposition =====

sal Considerations =====

Waste Disposal Methods:PREVENT WASTE FROM CONTAMINATING THE SURROUNDING ENVIRONMENT. KEEP PERSONNEL AWAY. DISCARD ANY PRODUCT, RESIDUE, DISPOSABLE CONTAINER OR LINER IN AN ENVIRONMENTALLY ACCEPTABLE MANNER, IN FULL COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. IF NECESSARY, CALL YOUR LOCAL SUPPLIER FOR ASSISTANCE

===== MSDS Transport Information =====

Transport Information:DOT/IMO SHIPPING NAME:

HELIUM, COMPRESSED. HAZARD

CLASS: 2.2. IDENTIFICATION NUMBER: UN1046. PRODUCT RQ: NOT APPLICATION. SHIPPING LABEL: NONFLAMMABLE. PLACARD: NONFLAMMABLE GAS. SPECIAL SHIPPING INFORMATION: CYLINDERS SHOULD BE TRANSPORTED IN A SECURE POSITION, IN A WELL-VENTILATED VEHICLE. CYLINDERS TRANSPORTED IN AN ENCLOSED, NONVENTILATED COMPARTMENT OF A VEHICLE CAN PRESENT SERIOUS SAFETY HAZARDS. SHIPMENT OF COMPRESSED GAS CYLINDERS THAT HAVE BEEN FILLED WITHOUT THE OWNER'S CONSENT IS A

VIOLATION OF FEDERAL LAW [49 CFR 173.301(B)].

===== Regulatory Information =====

SARA Title III Information:SECTIONS 302/304:REQUIRE EMERGENCY PLANNING BASED ON THRESHOLD PLANNING QUANTITY (TPQ) AND RELEASE REPORTING BASED ON REPORTABLE QUANTITIES (RQ) OF EXTREMELY HAZARDOUS SUBSTANCES (40 CFR PART 355): TPQ: NONE. EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355): NONE. SECTION 311/312 HAZARD CATEGORIES: IMMEDIATE: NO, DELAYED: NO, FIRE: NO, REACTIVITY: NO, PRESSURE: YES. SECTION 313 TOXIC CHEMICALS: HELIUM DOES NOT REQUIRE REPORTING. 40 CFR 68: HELIUM IS NOT LISTED AS A REGULATED SUBSTANCE.

Federal Regulatory Information:CERCLA: COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT OF 1980 (40 CFR PARTS 117 AND 302): REPORTABLE QUANTITY (RQ): NONE. TSCA: TOXIC SUBSTANCE CONTROL ACT: HELIUM IS LISTED ON THE TSCA INVENTORY. OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

): 29 CFR 1910.119:

PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS: HELIUM IS NOT LISTED IN APENDIX A AS A HIGHLY HAZARDO US CHEMICAL.

State Regulatory Information: CALIFORNIA: THIS PRODUCT IS NOT LISTED BY CALIFORNIA UNDER THE SAFE DRINKING WATER TOXIC ENFORCEMENT ACT OF 1986 (PROPOSITION 65). PENNSYLVANIA: THIS PRODUCT IS SUBJECT TO THE PENNSYLVANIA WORKER AND COMMUNITY RIGHT-TO-KNOW ACT (35 P.S. SECTIONS 7301-7320).

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===== Other Information  
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