

CRYOGENIC RARE GAS LABS -- HELIUM/OXYGEN/NITROGEN/KRYPTON-85 GAS MIXTU --  
5920-00-827-5751

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

Product ID:HELIUM/OXYGEN/NITROGEN/KRYPTON-85 GAS MIXTU  
MSDS Date:05/25/1988  
FSC:5920  
NIIN:00-827-5751  
MSDS Number: BPPMH  
=== Responsible Party ===  
Company Name:CRYOGENIC RARE GAS LABS  
Address:913 COMMERCE CIRCLE  
City:HANAHAN  
State:SC  
ZIP:29406  
Country:US  
Info Phone Num:803-747-0956  
Emergency Phone Num:803-747-0956/800-424-9300(CHEMTREC)

CAGE:7U103  
=== Contractor Identification ===  
Company Name:CRYOGENIC RARE GAS  
Address:913 COMMERCE CIRCLE  
Box:City:HANAHAN  
State:SC  
ZIP:29406  
Country:US  
Phone:843-747-0956  
CAGE:7U103  
Company Name:EG & G INC,ELECTRON DEVICES GROUP  
Address:35 CONGRESS  
Box:City:SALEM  
State:MA  
ZIP:01970-5507  
Country:US  
Phone:516-643-2120  
CAGE:25506

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

Ingred Name:HELIUM-OXYGEN MIXTURE  
CAS:58933-55-4  
RTECS #:MH6550000  
Other REC Limits:NONE RECOMMENDE

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Ingred Name:NITROGEN  
CAS:7727-37-9  
RTECS #:QW9700000  
Other REC Limits:NONE RECOMMENDED  
ACGIH TLV:ASPHYXIAN; 9293

Ingred Name:KRYPTON-85 (30 MICROCURIES MAXIMUM)  
Other REC Limits:NONE RECOMMENDED

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

LD50 LC50 Mixture:TLV = 1250 MILLIREM/QUARTER (WHOLE BODY)  
Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO  
Health Hazards Acute and Chronic:ACUTE - OXYGEN BELOW 21 PERCENT MAY CAUSE DIZZINESS, HEADACHE, NAUSEA, AND LOSS OF CONSCIOUSNESS.  
OXYGEN ABOVE 21 PERCENT MAY CAUSE CHEST PAIN. RADIATION MAY CAUSE NAUSEA, VOMITING, DIARRHEA, AND DEPRESSION. CHRONIC - NONE KNOWN.  
Effects of Overexposure:OXYGEN BELOW 21 PERCENT MAY CAUSE DIZZINESS, HEADACHE, NAUSEA, AND LOSS OF CONSCIOUSNESS. OXYGEN ABOVE 21 PERCENT MAY CAUSE CHEST PAIN. RADIATION MAY CAUSE NAUSEA, VOMITING, DIARRHEA, AND DEPRESSION.  
Medical Cond Aggravated by Exposure:NONE KNOWN

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

First Aid:INHALATION: MOVE VICTIM TO FRESH AIR. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION AND, IF NEEDED, OXYGEN. GET MEDICAL AID. RADIATION SICKNESS: GET MEDICAL HELP IMMEDIATELY.

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

Fire Fighting Procedures:OXYGEN IS NON-FLAMMABLE BUT SUPPORTS AND VIGOROUSLY ACCELERATES COMBUSTION OF FLAMMABLES.  
Unusual Fire/Explosion Hazard:SOME MATERIALS WHICH ARE NONFLAMMABLE IN AIR WILL BURN IN AN OXYGEN ENRICHED ATMOSPHERE.

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

Spill Release Procedures:SHUT OFF THE FLOW OF GAS. VENTILATE THE AREA. KRYPTON-85 WILL DISPERSE.

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

Handling and Storage Precautions:STORE AND USE CYLINDERS IN WELL-VENTILATED AREA AWAY FROM EXCESSIVE HEAT.  
Other Precautions:MAKE SURE ALL RESIDUAL VAPORS ARE REMOVED PRIOR TO BEGINNING REPAIR AND MAINTENANCE. MOVE CYLINDER

RS WITH A HAND TRUCK.

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

Respiratory Protection:WEAR NIOSH-APPROVED SELF CONTAINED BREATHING APPARATUS IF NEEDED.

Ventilation:MECHANICAL

Protective Gloves:LEATHER WORK GLOVES

Eye Protection:SAFETY GOGGLES

Other Protective Equipment:EYE WASH STATION, QUICK DRENCH SHOWER, SAFETY SHOES

Work Hygienic Practices:OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES.

Supplemental Safety and Health

HELIUM, NITROG

EN, AND KRYPTON-85 ARE NON-TOXIC, BUT EACH MAY ACT AS A

SIMPLE ASPHYXIANT. OXYGEN IS NONTOXIC. KRYPTON-85 IS A RADIOACTIVE ISOTOPE (30 MICROCURIES MAXIMUM).

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

HCC:A2

Solubility in Water:SLIGHT

Appearance and Odor:COLORLESS, ODORLESS GAS WITH HALF LIFE OF 10.76 YEARS

Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES

OTHER R

ADIOACTIVE MATERIALS, FLAMMABLES

Stability Condition to Avoid:EXCESSIVE HEAT, FIRE

Hazardous Decomposition Products:BETA PARTICLES AND GAMMA RAYS

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

Waste Disposal Methods:REPLACE THE CYLINDER VALVE OUTLET PLUG. REPLACE THE CYLINDER CAP. IF NO LEAKS ARE OBSERVED, RETURN THE CYLINDER TO YOUR SUPPLIER.

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