

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

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AS:58933-55-4  
RTECS #:MH6550000  
Other REC Limits:NONE RECOMMENDED

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 BEL

OW 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:NON  
E 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 REM  
OVED PRIOR TO  
BEGINNING REPAIR AND MAINTENANCE. MOVE CYLINDERS 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  
RECOM  
MENDED PROCEDURES.  
Supplemental Safety and Health  
HELIUM, NITROGEN, 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 =====

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Stability Indicator/Materials to Avoid: YES

OTHER RADIOACTIVE 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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