

CRYOGENIC RARE GAS LABS -- HELIUM/OXYGEN/NITROGEN/KRYPTON-85 GAS MIXTU --
5840-01-274-6624

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

Product ID:HELIUM/OXYGEN/NITROGEN/KRYPTON-85 GAS MIXTU

MSDS Date:05/25/1988

FSC:5840

NIIN:01-274-6624

MSDS Number: BRQSL

=== 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 AND G INC/ELECTRIC COMPONENTS DIV

Address:35 CONGRESS ST

Box:City:SALEM

State:MA

ZIP:01970-5507

Country:US

CAGE:7T714

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

Ingred Name:HELIUM/OXYGEN/NITROGEN/KRYPTON-85 GA

S MIXTURE

Fraction by Wt: 100%

Other REC Limits:1250 MREM/QUARTER

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

LD50 LC50 Mixture:TLV IS 1250 MILLIREM/QUARTER,WHOLE BODY

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO

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

Health Hazards Acute and Chronic:ACUTE- OXYGEN BELOW 21% MAY CAUSE
DIZZINESS, HEADACHE, NAUSEA & LOSS OF CONSCIOUSNESS. OXYGEN ABOVE
21% MAY CAUSE ASPHYXIATION, CHEST PAIN AND A

VARIETY OF CENTRAL

NERVOUS SYSTEM MANIFESTATIONS INCLUD ING TINGLING EXTREMITIES.

RADIATION SICKNESS MAY CAUSE NAUSEA, VOMITING, DIARRHEA AND
DEPRESSION. CHRONIC- NONE LISTED.

Explanation of Carcinogenicity:NONE SPECIFIED BY MANUFACTURER.

Effects of Overexposure:OXYGEN BELOW 21% MAY CAUSE DIZZINESS, HEADACHE,
NAUSEA & LOSS OF CONSCIOUSNESS. OXYGEN ABOVE 21% MAY CAUSE CHEST
PAIN. RADIATION MAY CAUSE NAUSEA, VOMITING, DIARRHEA AND
DEPRESSION.

Medical Cond Aggravated by Expo

sure:NONE SPECIFIED BY MANUFACTURER.

=====
===== 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 AID IMMEDIATELY.

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

Extinguishing Media:NONE SPECIFIED BY MANUFACTURER.

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.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:ST

ORE 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 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:EY

E WASH STATION, QUICK DRENCH SHOWER AND SAFETY SHOES

Work Hygienic Practices:OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND RECOMMENDED 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. RADIATION EMITTED: BETA PARTICLES AT 0.67 MEV AND GAMMA RAYS AT 0.52 MEV.

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

HCC:A1

Solub

ility 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 RADIOACTIVE MATERIALS, FLAMMABLES

Stability Condition to Avoid:EXCESSIVE HEAT, FIRE

Hazardous Decomposition Products:BETA PARTICLES AND GAMMA RAYS

Conditions to Avoid Polymerization:KEEP AWAY FROM EXCESS HEAT

===== Disposal Consider

ations =====

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

Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.