

ALLIED CORPORATION, CHEMICAL SECTOR -- GENETRON (R) 500 AZEOTROPE --
6830-00-088-0595

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

Product ID:GENETRON (R) 500 AZEOTROPE

MSDS Date:01/01/1986

FSC:6830

NIIN:00-088-0595

MSDS Number: BNBYH

=== Responsible Party ===

Company Name:ALLIED CORPORATION, CHEMICAL SECTOR

Box:1139R

City:MORRISTOWN

State:NJ

ZIP:07960

Country:US

Info Phone Num:201-455-4157

Emergency Phone

Num:201-455-2000

CAGE:OLYW2

=== Contractor Identification ===

Company Name:ALLIED CORPORATION, CHEMICAL SECTOR

Box:1139R

City:MORRISTOWN

State:NJ

ZIP:07960

Country:US

Phone:201-455-2000

CAGE:OLYW2

Company Name:REFRIGERATION SALES CO INC

Address:38-18 33RD ST

Box:City:LONG ISLAND CITY

State:NY

ZIP:11101-2211

Country:US

Phone:800-221-0603

CAGE:3A676

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

Ingred Name:GENETRON(R) 12 DICHLORODIFLUOROMETHANE (VAPOR PRESSURE 70.2
PSI

G @70F)(MOLECULAR WEIGHT 120.91)(FORMULA:CCL2F2) #

CAS:75-71-8

RTECS #:PA8200000

Fraction by Wt: 73.8%

Other REC Limits:NONE SPECIFIED

OSHA PEL:1000 PPM

ACGIH TLV:1000 PPM

EPA Rpt Qty:5000 LBS

DOT Rpt Qty:5000 LBS

Ozone Depleting Chemical:1

Ingred Name:# LC50 (IHL-RAT) 80 PPH/30 MIN. TLCLO (HUMAN): 200,000 PPM/30 MIN.

RTECS #:9999999ZZ

Other REC Limits:NONE SPECIFIED

Ingred Name:GENETRON (R) 152A DIFLUOROETHANE (VAPOR PRESSURE 62.5 PSIG @ 70F) (MOLECULAR WEIGHT: 66.05) (FORMULA: CH3CHF

2)##

CAS:75-37-6

RTECS #:KI1410000

Fraction by Wt: 26.2%

Other REC Limits:1000 PPM

Ingred Name:## LCLO (IHL RAT) 50 PPH/10 MIN.

RTECS #:9999999ZZ

Other REC Limits:NONE SPECIFIED

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

LD50 LC50 Mixture:SEE INGREDIENTS

Health Hazards Acute and Chronic:INHAL: PREDOMINANT HZD IS ASPHYXIA.

MAT'L IS LOW IN TOXICITY AT CONCENTRATIONS AS HIGH AS 4%. WHEN OXYGEN LEVELS IN AIR ARE REDUCED TO 12-14% SYMPTOMS OF ASPHYXIATION WILL

OCCUR. SKIN: CONTACT W/ LIQU ID MAT'L CAN CAUSE FROSTBITE, INDICATEDBY PALLOR OR REDNESS, LOSS OF SENSATION AND SWELLING. EYES: SAME AS FOR SKIN.

Effects of Overexposure:INHALATION: LOSS OF COORDINATION, INCREASED PULSE RATE, CARDIAC SENSITIZATION AND DEEPER RESPIRATION ARE POSSIBLE. MILD CNTRL NERV SYS DEPRESS. CARDIAC ARRHYTHMIA & MYOCARDIAL DEPRESSION SEEN IN ANIMA L STUDIES. THIS PRODUCT CAN CAUSE DEATHOR SERIOUS PERSONAL INJURY IF NOT HANDLED PROPERLY.

Medical Cond

Aggravated by Exposure:WORKERS WITH CARDIOVASCULAR OR
PULMONARY PROBLEMS SHOULD HAVE MEDICAL EVALUATION BEFORE EXPOSURE.

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

First Aid:INHAL: REMOVE IMMEDIATELY TO FRESH AIR. IF BREATH STOPPED, GIVE
ARTIFICIAL RESPIRATION (MOUTH-TO-MOUTH). CALL DR. USE OXYGEN AS REQUIRED IF
QUALIFIED OPERATOR AVAILABLE. DON'T GIVE EPINEPHRINE (ADRENALIN).
SKIN: IMMEDIATELY BATHE FROSTBITE (DON'T RUB) WITH LUKEWARM (NOT HOT)
WATER. IN ABSENCE OF WATER, COVER WITH SOFT WOOL, ETC. CONTACT DR FOR
ANY LOW TEMP BURN FROM LIQ. REMOVE CONTAMINATED CLOTH. EYE: LIFT EYELID
WHILE WASHING 15 MIN.

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

Extinguishing Media:ANY STANDARD AGENT--CHOOSE THE ONE THAT IS
APPROPRIATE FOR TYPE OF FIRE.
Fire Fighting Procedures:WEAR SCBA FOR PROTECTION AGAINST SUFFOCATION &
POSSIBLE TOXIC DECOMPOSITION PRODUCTS. PROVIDE EYE & SKIN PROTECTION. USE
WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS.
Unusual Fire
/Explosion Hazard:NOT COMBUSTIBLE, CONTACT WITH SOME METALS MAY
PRODUCE EXOTHERMIC REACTION/POTENTIALLY EXPLOSIVE COMBINATIONS. SEE
HAZARD DECOMPOSITION.

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

Spill Release Procedures:IF LARGE QUANTITY RELEASED, EVACUATE UNTIL
DISPERSED. USING SELF-CONTAINED AIR SUPPLY & PROTECT FROM
FROSTBITE, ATTEMPT TO CLOSE VALVE/REPAIR LEAK, IF WITHOUT RISK. VENT.
REMOVE LEAKING CYLINDER TO OUTSIDE. UPRIGHT OVERTURNED CYLINDER. MAY
NEED TO REPORT SPOILAGE.
ILL.

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

Handling and Storage Precautions:AVOID EYE/SKIN/CLOTHING CONTACT. DON'T
PUNCTURE/DROP CYLINDERS/EXPOSE TO FLAME/HEAT. USE AUTHORIZED
CONTAINERS. FOLLOW STANDARD SAFETY PRECAUTION FOR COMPRESSED GAS
Other Precautions:STORE IN COOL, DRY, VENTED AREA AWAY FROM HEAT/FLAME/
COMBUSTIBLES. PROTECT CYLINDER & FITTINGS FROM DAMAGE. AVOID
STORAGE IN SUBSURFACE LOCATIONS. FOLLOW OSHA REGULATIONS FOR
COMPRESSED GAS & FOR CYLINDER

DER HANDLING.

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

Respiratory Protection:NONE GENERALLY REQUIRED FOR ADEQUATELY VENTED SITUATIONS. FOR ACCIDENTAL OR NON-VENTILATED SITUATIONS, WHERE CONCENTRATIONS MAY BE HIGH, USE A SCBA OR SUPPLIED-AIR RESPIRATOR W/FULL FACEPIECE. ALL EQUIPMENT SHOULD BE APPROVED BY NIOSH.

Ventilation:PROVIDE LOCAL EXHAUST AT FILLING ZONES & WHEREVER LEAKAGE PROBABLE. MECHANICAL (GEN) VENT FOR OPERATING/STORAGE AREAS.

Protective

Equipment:Gloves:IMPERVIOUS W/MYLAR COATED DURAFAB

Eye Protection:CHEM SAFETY GOGGLES IF CONTACT

Other Protective Equipment:WEAR IMPERVIOUS SHOES & CLOTHING WHERE LEAKAGE IS PROBABLE. GLOVES, CLOTHING, SHOES SHOULD BE THERMALLY INSULATED.

Work Hygienic Practices:PROVIDE WATER SOURCE--FIRST AID TREATMENT (FROSTBITE). (PVA/NEOPRENE-2ND CHOICES) & THERMAL INSULATION UNDERNEATH.

Supplemental Safety and Health

Information:IS REASONABLE PROBABILITY. IN THIS CASE, DON'T WEAR CONTACT LENSES. HIGH CONC

IN AIR (20X TLV) HAVE BEEN SHOWN TO REDUCE VENT CAPACITY OF LUNGS TEMPORARILY & TO PRODUCE MINOR CARDIAC EFFECTS (INCREASED BY EPINEPHRINE).

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

HCC:G3

Boiling Pt:B.P. Text:-28F,-34C

Melt/Freeze Pt:M.P/F.P Text:-158TO-119C

Vapor Pres:85.4 PSIG

Vapor Density:3.52 @ 0C

Spec Gravity:1.171 LIQ;WTR=1

Evaporation Rate & Reference:N/K & 1 ATM

Solubility in Water:SLIGHT

Appearance and Odor:COLORLESS GAS WITH FAINT ETHEREAL ODOR.

Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES

STRONG OXIDANTS (HALOGENS), HOT REACTIVE METALS (MOLTEN AL, SHAVINGS BARIUM, LITHIUM). ALKALINE EARTH METALS.

Stability Condition to Avoid:FIRES, HOT SURFACES, LIGHTED CIGARETTES, WELDING. HIGH TEMPERATURES CAUSE DECOMPOSITION, YIELDING TOXIC GASES.

Hazardous Decomposition Products:NO ACTUAL DATA, BUT FROM ANALOGY (OTHER FLUOROCARBO

NS): HALOGENS, HALOGEN ACIDS, CARBONYL HALIDES
(PHOSGENE), CO, CO2.

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

Waste Disposal Methods:DISPOSAL OF WASTE PRODUCT MAY BE SUBJECT TO FED
REGS. REVIEW OPERATIONS, THEN CONSULT W/REGULATORY AGENCIES BEFORE
DISCHARGING/DISPOSING OF WASTE MATERIAL. DISPOSAL BY LICENSED WASTE
DISPOSAL COMPANY MAY BE NECESSARY. EPA HAZARDOUS WASTE #UO75.

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.