

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 SPILL.

===== 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

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

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, CO<sub>2</sub>.

===== 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.

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