

ALLIED-SIGNAL CORP,ENGINEERED MATERIALS DIV -- GENETRON 502 AZEOTROPE --  
6830-00-138-2482

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

Product ID:GENETRON 502 AZEOTROPE

MSDS Date:05/01/1989

FSC:6830

NIIN:00-138-2482

MSDS Number: BDBHZ

=== Responsible Party ===

Company Name:ALLIED-SIGNAL CORP,ENGINEERED MATERIALS DIV

Address:PARK AVE AND COLUMBIA RD

Box:1087R

City:MORRISTOWN

State:NJ

ZIP:07960

Country:US

Inf

o Phone Num:201-455-4157

Emergency Phone Num:201-455-4157

CAGE:0W357

=== Contractor Identification ===

Company Name:ALLIED-SIGNAL INC

Box:2332R

City:MORRISTOWN

State:NJ

ZIP:07962-2332

Country:US

Phone:201-455-4414

CAGE:1L164

Company Name:PDI GROUND SUPPORT SYSTEMS INC

Address:5905 GRANT AVE

Box:City:CLEVELAND

State:OH

ZIP:44105

Country:US

Phone:216-271-7344

CAGE:0W357

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

Ingred Name:CHLORODIFLUOROMETHANE

CAS:75-45-6

RTECS #:PA63

90000  
Fraction by Wt: 48.8%  
Other REC Limits:NONE SPECIFIED  
OSHA PEL:1000 PPM  
ACGIH TLV:1000PPM; 9192  
Ozone Depleting Chemical:2

Ingred Name:CHLOROPENTAFLUOROETHANE (SARA III)  
CAS:76-15-3  
RTECS #:KH7877500  
Fraction by Wt: 51.2%  
Other REC Limits:NONE SPECIFIED  
OSHA PEL:1000 PPM  
ACGIH TLV:1000 PPM; 9192  
Ozone Depleting Chemical:1

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

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO  
Reports of Carcinogenicity:NTP:NO IARC:  
NO OSHA:NO  
Health Hazards Acute and Chronic:HEALTH HAZARDS: ACUTE: MAY CAUSE  
ASPHYXIATION BY REDUCING OXYGEN AVAILABLE FOR BREATHING. EXPOSURE  
TO VERY HIGH CONCENTRATIONS MAY PRODUCE NARCOSIS AND HEART  
IRREGULARITIES. LIQUID CAN CAUSE FROSBITE. CHRONIC: NONE SPECIFIED  
BY MANUFACTURER.  
Explanation of Carcinogenicity:NONE OF THE INGREDIENTS IN THIS PRODUCT  
IS LISTED BY NTP, IARC OR OSHA AS A CARCINOGEN.  
Effects of Overexposure:LIQUID CAN CAUSE FROSTBITE. VAPOR CAN CAUSE  
LIG  
HTHEADEDNESS, GIDDINESS, SHORTNESS OF BREATH, AND MAY LEAD TO  
NARCOSIS, CARDIAC IRREGULARITIES, UNCONSCIOUSNESS OR DEATH.  
Medical Cond Aggravated by Exposure:INDIVIDUALS WITH A HISTORY OF  
CARDIOVASCULAR OR RESPIRATORY DISORDERS MAY BE AT INCREASED RISK  
FROM EXPOSURE.

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

First Aid:EYES:FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.SEE  
DOCTOR. SKIN:WASH WITH WATER.TREAT FOR FROSTBITE. INHALATION:REMOVE  
VIC

TIM TO FRESH AIR.GIVE OXYGEN/CPR IF NEEDED.SEE DOCTOR.DO NOT GIVE EPI NEPHRINE OR SIMILAR DRUGS. NOTE TO PHYSICIAN: BECAUSE OF INCREASED RISK OF CARDIAC DYSRYTHMIAS,CATECHOLAMINE DRUGS,SUCH AS EPINEPHRINE SHOULD BE CONSIDERED ONLY AS A LAST RESORT.

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

Extinguishing Media:NON-FLAMMABLE. USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.

Fire Fighting Procedures:WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A

FULL FACED SELF CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER SPRAY.

Unusual Fire/Explosion Hazard:COMBUSTION OR HEAT OF FIRE MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS AND VAPORS. CONTAINERS UNDER PRESSURE MAY RUPTURE WITH HEAT OF FIRE.

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

Spill Release Procedures:REMOVE PERSONNEL. REMOVE OPEN FLAMES. VENTILATE AREA, ESPECIALLY LOW PLACES WHERE HEAVY VAPORS MIGHT COLLECT. WEAR SE

LF-CONTAINED BREATHING APPARATUS AND PROTECTION AGAINST FROSTBITE. STOP LEAK IF WIT HOUT RISK. IF NOT ALLOW TO DISSIPATE.

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

Handling and Storage Precautions:STORE IN COOL, DRY, WELL VENTILATED AREA AWAY FROM HEAT, FLAME OR COMBUSTIBLES. PROTECT FROM PHYSICAL DAMAGE. AVOID SUBSURFACE LOCATIONS. KEEP CLOSED.

Other Precautions:AVOID EYE AND SKIN CONTACT. DO NOT BREATHE GAS. DO NOT PUNCTURE OR DROP CYLINDER OR EX

POSE TO OPEN FLAME OR HEAT. USE AUTHORIZED CONTAINER ONLY. FOLLOW LABEL INSTRUCTIONS AND OBSERVE STANDARD SAFETY P RECAUTIONS FOR COMPRESSED GAS CYLINDERS.

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

Respiratory Protection:NONE NORMALLY REQUIRED. NIOSH/MSHA-APPROVED SELF-CONTAINED BREATHING APPARATUS FOR ACCIDENTAL RELEASES OR NON-VENTILATED SITUATIONS.

Ventilation:GENERAL (MECHANICAL) VENTILATION IN LOW PLACES. USE LOCAL EXHAUST FOR LARGE RELEASE.

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Protective Gloves:MYLAR OUTSIDE. THERMAL INSULATION INSIDE

Eye Protection:CHEMICAL SPLASH GOGGLES.

Other Protective Equipment:PROTECTIVE CLOTHING WITH OUTER LAYER OF MYLAR AND THERMAL INSULATION UNDERNEATH. WATER SOURCE FOR FROSTBITE.

Work Hygienic Practices:WASH THOROUGHLY AFTER HANDLING AND BEFORE EATING. LAUNDRY CONTAMINATED CLOTHING BEFORE REUSE.

Supplemental Safety and Health

ITEM NAME: MONOCHLORODIFLUOROMETHANE AND MONOCHLOROPENTAFLUOROETHANE, AZEOTROPIC MIXTURE. OTHER PRECA

UTIONS: WEAR IMPERVIOUS BOOTS OR

SHOES WITH OUTER LAYER OF MYLAR AND THERMAL INSULATION UNDERNEATH.

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

HCC:G3

Boiling Pt:B.P. Text:-50F,-45C

Vapor Pres:137.8

Vapor Density:3.93

Spec Gravity:1.258

Solubility in Water:SLIGHT.

Appearance and Odor:COLORLESS LIQUIFIED GAS WITH FAINT ETHEREAL ODOR AT HIGH CONCENTRATIONS.

Percent Volatiles by Volume:100

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

Stabi

lity Indicator/Materials to Avoid:YES

STRONG OXIDANTS, MOLTEN ALUMINUM, SHAVINGS OF BARIUM, LITHIUM, ALKALINE EARTH METALS SUCH AS SODIUM, POTASSIUM, BARIUM.

Stability Condition to Avoid:HIGH HEAT, OPEN FLAMES AND OTHER SOURCES OF IGNITION

Hazardous Decomposition Products:HALOGENS, HALOGEN ACIDS, CARBONYL HALIDES SUCH AS PHOSGENE, CARBON MONOXIDE, CARBON DIOXIDE.

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

Waste Disposal Methods:CONTACT YOUR LOCAL ENVIRONMENTAL OFFICER.

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. MANUFACTURER STATES NOT A HAZARDOUS WASTE.

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