

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

Info Phone Num:201-455-4157

Emergency Phone Num:201-455-4157

CAGE:0

W357

=== 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 #:PA6390000

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

===== 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: ACUT
E: 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 LIGHTHEADEDNESS, 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.

===== 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 VICTIM 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.

===== 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 EXPO

SED

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.

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

Spill Release Procedures:REMOVE PERSONNEL. REMOVE OPEN FLAMES.
VENTILATE AREA, ESPECIALLY LOW PLACES WHERE HEAVY VAPORS MIGHT
COLLECT. WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTION
AGAINST FROSTBITE. STOP LEAK IF WITHOUT 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 EXPOSE TO OPEN FLAME OR HEAT. USE
AUTHORIZED CONTAINER ONLY. FOLLOW LABEL INSTRUCTIONS AND OBSERVE
STANDARD SAFETY PRECAUTIONS FOR COMPRESSED GAS CYLINDERS.

===== 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.

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. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

Supplemental Safety and Health

ITEM NAME: MONOCHLORODIFLUOROMETHANE AND MONOCHLOROPENTAFLUOROETHANE,
AZEOTROPIC MIXTURE. OTHER PRECAUTIONS: WEAR IMPERVIOUS BOOTS OR
SHOES WITH OUTER LAYER OF M

YLAR 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 =====

Stability Indicator/Materials to Avoid:YES

STRONG OXIDANTS, MOLTEN AL

UMINUM, 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, STAT
E AND LOCAL
REGULATIONS. MANUFACTURER STATES NOT A HAZARDOUS WASTE.

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