

ALLIED-SIGNAL, INC; ENGINEERED MATERIAL SECTOR -- GENETRON (R) 22
CHLORODIFLUOROMETHANE -- 6830-00-227-0441

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Product Identification
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Product ID:GENETRON (R) 22 CHLORODIFLUOROMETHANE

MSDS Date:05/01/1989

FSC:6830

NIIN:00-227-0441

MSDS Number: BNBZM

=== Responsible Party ===

Company Name:ALLIED-SIGNAL, INC; ENGINEERED MATERIAL SECTOR

Box:1139R

City:MORRISTOWN

State:NJ

ZIP:07960-1139

Count

ry:US

Info Phone Num:201-455-4157

Emergency Phone Num:201-455-2000

CAGE:05VM8

=== Contractor Identification ===

Company Name:ALLIED-SIGNAL INC

Address:101 COLUMBIA RD

Box:1053

City:MORRISTOWN

State:NJ

ZIP:07962-1053

Country:US

Phone:201-455-4157/201-455-2000

CAGE:05VM8

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

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Composition/Information on Ingredients
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Ingred

Name:GENETRON 22 CHLORODIFLUOROMETHANE(FLUOROCARBON 22;
REFRIGERANT 22; PROPELLANT 22)(FORMULA CHCLF2) MOLECULAR WEIGHT
86.47
CAS:75-45-6
RTECS #:PA6390000
Fraction by Wt: 100%
Other REC Limits:NONE SPECIFIED
OSHA PEL:1000 PPM
ACGIH TLV:1000PPM/1250PPM STEL
Ozone Depleting Chemical:2

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Hazards Identification
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Health Hazards Acute and Chronic:INHAL: MAT'L IS LOW IN TOXICITY AT
CONCENTRATIONS AS HIGH AS 4%. WHEN OXYGEN LEVELS IN AIR ARE RED
UCED
TO 12-14% SYMPTOMS OF ASPHYXIATION WILL OCCUR. NARCOTIC EFFECTS.
SKIN: CONTACT W/LIQUID MAT'L CAN CAUSE FROSTBITE, INDICATED BY
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.
***ANIMAL: REDUCED HEART
EFFICIENCY, CARDIAC SENSITIZATION TO EPINEPHRINE. INCREASE IN
SALIVAR
Y GLAND TUMORS (RAT).

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

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First Aid Measures
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First Aid:INHAL: REMOVE IMMEDIATELY TO FRESH AIR. IF BREATHING HAS STOPPED,
GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. USE OXYGEN AS
REQUIRED, IF QUALIFIED OPERATOR IS AVAILABLE. DON'T GIVE
EPINEPHRINE (ADRENALIN). SKIN/EYE CONTACT: IMMEDIATELY BATHE FROSTBITE

(DO NOT RUB) WITH LUKEWARM (NOT HOT) WATER. IN ABSENCE OF WATER
COVER WITH SOFT WOOL, ETC. CONTACT DR FOR ANY LOW TEMPERATURE BURNS
FROM LIQUID CONTACT.

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Fire Fighting Measures
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Extinguishing Media:ANY STANDARD AGENT--CHOOSE THE ONE THAT IS
APPROPRIATE FOR TYPE OF FIRE. MATERIAL ITSELF IS NON-FLAMMABLE.
Fire Fighting Procedures:WEAR SELF-CONTAINED NIOSH BREATHING APPARATUS
FOR PROTECTION AGAINST SUFFOCATION & POSSIBLE TOXIC DECOMPOSITION

PRODUCTS. USE WATER SPRAY TO COOL FIRE EXPOSED CNTNRS.
Unusual Fire/Explosion Hazard:WHILE NOT COMBUSTIBLE, CONTACT W/CERTAIN METALS & OXIDIZING MAT'LS MAY PRODUCE EXOTHERMIC REACTION/POTENTIALLY EXPLOS COMBINATIONS. SEE HAZARD DECOMP.

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

Spill Release Procedures:USING SELF-CONTAINED AIR SUPPLY & PROTECTION AGAINST FROSTBITE, PERSONNEL SHOULD ATTEMPT TO CLOSE VALVES OR REPAIR SOURCE OF LEAK. IF LARGE QUANTITY I
S RELEASED, EVACUATE
PERSONNEL AND ALLOW TO DISSIP ATE.

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

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

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

Respiratory Protection:NONE GENERALLY REQUIRED FOR ADEQUATELY VENTED SITUATIONS. FOR UNUSUAL SITUATIONS, WEAR A NIOSH APPROVED, SUPPLIED AIR RESPIRATOR OR A POSITIVE PRESSURE, SELF-CONTAINED BREATHING APPARATUS. AT HIGH CON CENTRATIONS ADD A FULL FACEPIECE.

Ventilation:PROVIDE LOCAL EXHAUST AT FILLING ZONES/AREA LEAK LIKELY.
MECHAN(GEN) VENT FO
R OTHER OPERATING/STORAGE AREAS.

Protective Gloves:IMPERVIOUS GLOVES W/PVA OUTER LAYER****

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 FOR FIRST AID TREATMENT (FROSTBITE). **** (NEOPRENE-2ND CHOICE) IF HANDLING/LEAKAGE POSSIBLE.

Supplemental Safety and Health
***** IS REASONABLE PROBABI

LITY. IN THIS CASE, DON'T WEAR CONTACT LENSES.

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

Boiling Pt:B.P. Text:-41F,-41C
Melt/Freeze Pt:M.P/F.P Text:-256F,-160C
Vapor Pres:136 PSIA
Vapor Density:2.98
Spec Gravity:1.21 LIQ@21.1C*
pH:N/K **
Evaporation Rate & Reference:N/K *(PRESSUREIZED)WTR=1
Solubility in Water:0.3 @ 25C & 1 ATM
Appearance and Odor:COLORLESS LIQUEFIED GAS WITH FAINT ETHEREAL ODOR AT HIGHER CONCENTRATIONS.
Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES
STRONG OXIDANTS, ALKALI METALS, ALKALINE EARTH METALS. FRESHLY EXPOSED ALUMINUM SURFACES.
Stability Condition to Avoid:FIRES, LIGHTED CIGARETTES, HOT SPOTS, WELDING. DECOMPOSES AT HIGH TEMPERATURES, YIELDING TOXIC GASES.
Hazardous Decomposition Products:HALOGENS, HALOGEN ACIDS, CARBON DIOXIDE, CARBON MONOXIDE, AND POSSIBLY CARBONYL HALIDES, SUCH AS PHOSGENE.

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

Waste Disposal Methods:DISPOSE OF WASTE PRODUCT MAY BE SUBJECT TO FEDERAL REGULATIONS. USERS SHOULD REVIEW OPERATIONS, THEN CONSULT WITH REGULATORY AGENCIES BEFORE DISCHARGING OR DISPOSING OF WASTE MATERIAL. DISPOSAL BY LIC ENSED WASTE DISPOSAL COMPANY MAY BE NECESSARY.

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