172556
DOD Hazardous Materials Information System

DoD 6050.5-L

AS OF July 1998

FSC: 6830
NIIN: 013446534
Manufacturer's CAGE: 2A580
Part No. Indicator: A
Part Number/Trade Name: REFRIGERANT 12, FREON 12, GENETRON 12, (SUP

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General Information

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Item Name: DICHLORODIFLUOROMETHANE & DIFLUOROETHANE, AZEOTROPIC MIX
Company's Name: RACON INC
Company's Street:
Company's P. O. Box: 198
Company's City: WICHITA
Company's State: KS
Company's Country: US
Company's Zip Code: 67201
Company's Emerg Ph #: 415-821-5338
Company's Info Ph #: 316-524-3245 OR 800-835-2916
Distributor/Vendor # 1:
Distributor/Vendor # 1 Cage:
Distributor/Vendor # 2:
Distributor/Vendor # 2 Cage:
Distributor/Vendor # 3:
Distributor/Vendor # 3 Cage:
Distributor/Vendor # 4:
Distributor/Vendor # 4 Cage:
Safety Data Action Code:
Safety Focal Point: N
Record No. For Safety Entry: 001
Tot Safety Entries This Stk#: 001
Status: SMJ
Date MSDS Prepared: 07APR89
Safety Data Review Date: 19MAY92
Supply Item Manager:
MSDS Preparer's Name:
Preparer's Company:
Preparer's St Or P. O. Box:
Preparer's City:
Preparer's State:
Preparer's Zip Code:
Ingredients/Identity Information

Proprietary: NO
Ingredient: METHANE, DICHLORODIFLUORO--; (DICHLORODIFLUOROMETHANE) (SARA III). VP: 79.8 PSIG @ 77F. VD: 2.32 LB/FT3 @ 77F.
Ingredient Sequence Number: 01
Percent: N/K
Ingredient Action Code: 
Ingredient Focal Point: N
NIOSH (RTECS) Number: PA8200000
CAS Number: 75-71-8
OSHA PEL: NOT APPLICABLE
ACGIH TLV: 1000PPM; 1250STEL (MFR)
Other Recommended Limit: N/K

Proprietary: NO
Ingredient: EHTS OF OVEREXPOS:PROPERTIES (ASPHY, CARDIAC ARRHYTHMIAS) WHEN SNIFFED. SKIN: CONT OF LIQ WILL RESULT IN FREEZING (ING 3)
Ingredient Sequence Number: 02
Percent: N/K
Ingredient Action Code:
Ingredient Focal Point: N
NIOSH (RTECS) Number: 9999999ZZ
CAS Number:
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE
Other Recommended Limit: N/K
Proprietary: NO
Ingredient: ING 2: & FROSTBITE OF CONT TISSUE. EYES: CONT OF VAP WILL RESULT IN MILD INFLAMM. INGEST: NOT PROBABLE. FREEZING & (ING 4) Ingredient Sequence Number: 03 Percent: N/K Ingredient Action Code: Ingredient Focal Point: N NIOSH (RTECS) Number: 9999999ZZ CAS Number: OSHA PEL: NOT APPLICABLE ACGIH TLV: NOT APPLICABLE Other Recommended Limit: N/K

Proprietary: NO

Report for NIIN: 013446534

NIOSH (RTECS) Number: 9999999ZZ CAS Number: OSHA PEL: NOT APPLICABLE ACGIH TLV: NOT APPLICABLE Other Recommended Limit: N/K

Proprietary: NO
Ingredient: ING 4: COORDINATION & MILD DEPRESSION. EFTS DISAPPEARED RAPIDLY AFTER CESSION. INGEST: A SLIGHT EFT ON LIVER (ING 6) Ingredient Sequence Number: 05 Percent: N/K Ingredient Action Code: Ingredient Focal Point: N NIOSH (RTECS) Number: 9999999ZZ CAS Number: OSHA PEL: NOT APPLICABLE ACGIH TLV: NOT APPLICABLE Other Recommended Limit: N/K

Proprietary: NO
Ingredient: ING 5: FUNCTION IN RATS. CARDIAC STUDIES: CARDIAC SENSIT
POTENTIAL IS CONSIDERED MOD. AT HIGH CONC CAPABLE OF (ING 7)
Ingredient Sequence Number: 06
Percent: N/K
Ingredient Action Code:
Ingredient Focal Point: N
NIOSH (RTECS) Number: 9999999ZZ
CAS Number:
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE
Other Recommended Limit: N/K
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Proprietary: NO
Ingredient: ING 6:SENSIT HEART TO INJECTED EPINEPHRINE, RESULTING IN IRREGULAR HEART BEAT (CARDIAC ARRHYTHMIAS), WHICH (ING 8)
Ingredient Sequence Number: 07
Percent: N/K
Ingredient Action Code:
Ingredient Focal Point: N
NIOSH (RTECS) Number: 9999999ZZ
CAS Number:
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE
Other Recommended Limit: N/K
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Proprietary: NO
Ingredient: ING 7:SOMETIMES HAS BEEN FATAL.
Ingredient Sequence Number: 08
Percent: N/K
Ingredient Action Code:
Ingredient Focal Point: N
NIOSH (RTECS) Number: 9999999ZZ
CAS Number:
Report for NIIN: 013446534
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE
Other Recommended Limit: N/K
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Proprietary: NO
Ingredient: FIRST AID PROC:20 MIN. LIQ:BECAUSE OF DEFATTING EFTS OF PR OD, SKIN & EYE IRRIT MAY OCCUR. FLUSH EXPOSED SKIN & (ING 10)
Ingredient Sequence Number: 09
Percent: N/K
Ingredient Action Code:
Ingredient Focal Point: N
NIOSH (RTECS) Number: 9999999ZZ
Page 4
CAS Number:
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE
Other Recommended Limit: N/K
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Proprietary: NO
Ingredient Sequence Number: 10
Percent: N/K
Ingredient Action Code:
Ingredient Focal Point: N
NIOSH (RTECS) Number: 9999999ZZ
CAS Number:
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE
Other Recommended Limit: N/K
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Proprietary: NO
Ingredient: ING 10:INGEST:LIQ:NOT PROBAB. HOWEVER IF INGEST, KEEP PATIENT CALM, IF CONSCIOUS & GET TO MD IMMEDIATELY. FROSTBITE (ING 12)
Ingredient Sequence Number: 11
Percent: N/K
Ingredient Action Code:
Ingredient Focal Point: N
NIOSH (RTECS) Number: 9999999ZZ
CAS Number:
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE
Other Recommended Limit: N/K
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Proprietary: NO
Ingredient: ING 11:IS PROBAB., INDICATED BY NECROSIS OF LIPS & TONGUE (CONTACTED TISSUE), BLANCHING OF SKIN, PAIN & (ING 13)
Ingredient Sequence Number: 12
Percent: N/K
Ingredient Action Code:
Ingredient Focal Point: N
NIOSH (RTECS) Number: 9999999ZZ
CAS Number:
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE
Other Recommended Limit: N/K

Report for NIIN: 013446534

ACGIH TLV: NOT APPLICABLE
Other Recommended Limit: N/K
Proprietary: NO
Ingredient: ING 12: TENDERNESS. WARM SKIN SLOWLY.
Ingredient Sequence Number: 13
Percent: N/K
Ingredient Action Code:
Ingredient Focal Point: N
NIOSH (RTECS) Number: 9999999ZZ
CAS Number:
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE
Other Recommended Limit: N/K

Physical/Chemical Characteristics

Appearance And Odor: COLORLESS LIQUID & VAPOR WITH VERY SLIGHT ETHEREAL ODOR/ODORLESS.
Boiling Point: -22F, -30C
Melting Point: N/K
Vapor Pressure (MM Hg/70 F): SEE ING
Vapor Density (Air=1): SEE ING
Specific Gravity: 1.31 (WATER =1)
Decomposition Temperature: N/K
Evaporation Rate And Ref: NOT APPLICABLE
Solubility In Water: INSOLUBLE
Percent Volatiles By Volume: 100
Viscosity:
pH: N/K
Radioactivity:
Form (Radioactive Matl):
Magnetism (Milligauss): N/P
Corrosion Rate (IPY): N/K
Autoignition Temperature:

Fire and Explosion Hazard Data

Flash Point: NON FLAMMABLE
Flash Point Method: N/P
Lower Explosive Limit: N/K
Upper Explosive Limit: N/K
Extinguishing Media: MEDIA SUITABLE FOR SURROUNDING FIRE (FP N)
Special Fire Fighting Proc: WEAR NIOSH/MSHA APPROVED PRESSURE DEMAND SCBA
AND FULL PROTECTIVE EQUIPMENT (FP N).
Unusual Fire And Expl Hazards: THERMAL DECOMPOSITION PRODUCTS MAY INCLUDE CHLORIDES, FLUORIDES AND PHOSGENE (FP N).

Reactivity Data
Stability: YES
Cond To Avoid (Stability): AVOID CONDITIONS WHERE CFC-12 MAY CONTACT OPEN FLAMES OR EXTREMELY HOT METAL SURFACES.

Report for NIIN: 013446534
Materials To Avoid: CERTAIN ELASTOMERS, ALKALI/ALKALINE EARTH METALS, POWDERED ALUMINUM, ZINC, BERYLLIUM ETC. MCA REPORTED THAT (SUPDAT) Hazardous Decomp Products: CHLORIDES, FLUORIDES & PHOSGENE (FP N). HF, HCL & TRACES OF CARBONYL HALIDES.
Hazardous Poly Occur: NO
Conditions To Avoid (Poly): NOT RELEVANT

Health Hazard Data
LD50-LC50 Mixture: NONE SPECIFIED BY MANUFACTURER.
Route Of Entry - Inhalation: YES
Route Of Entry - Skin: NO
Route Of Entry - Ingestion: NO
Health Haz Acute And Chronic: CHLOROFLUOROCARBON MATLS HAVE PRODUCED SENSIT OF MYOCARDIUM TO EPINEPHRINE IN LAB ANIMALS & COULD HAVE SIMILAR EFFECT IN HUMANS. ADRENOMETRICS (E.G., EPINEPHRINE) MAY BE CONTRAINDICATED EXCEPT FOR LIFE-SUSTAINING USES IN HUMANS ACUTELY/CHRONICALLY EXPOSED TO CFCS (FP N). ACUTE:INHAL:MAY AFFECT RESP/ (EFTS OF OVEREXP)
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: NOT RELEVANT
Signs/Symptoms Of Overexp: HLTH HAZ:CARdioVASCULAR SYS. MAY CAUSE TINGLING SENSATION, HUMMING IN EARS, APPREHENSION & SLURRED SPEECH, DECREASE IN CONSCIOUSNESS W/AMNESIA, IRREGULAR HEART BEAT, EYE IRRIT, CNS EFTS.
172556

SNIFFING OF FLUOROCARBON PROPELLANTS FOR THEIR INTOX EFTS HAS PRODUCED OVER 100 DEATHS. FLUOROCARBONS EXHIBIT VERY TOX (ING 2) Med Cond Aggravated By Exp: INDIVIDUALS W/HEART OR RESPIRATORY DISORDERS MAY BE ESPECIALLY SUSCEPTIBLE TO HEALTH HAZARDS. Emergency/First Aid Proc: INHAL:REMOVE TO FRESH AIR. KEEP WARM & AT REST. IF BRTHG IS DFCLT (LABORED), GIVE O*2. IF NOT BRTHG, GIVE ARTIF RESP & CHECK FOR PULSE. IF NO PULSE START CPR. DO NOT GIVE STIMULANTS (ADRENA LINE, EPINEPHRINE/HAND HELD ASTHMA AEROSOLS). CALL 911 (IF AVAILABLE) & MD. KEEP PATIENT AT REST FOR 24 HRS AFTER OVEREXPOS. NO LONG TERM EFTS ARE EXPECTED. EYE/SKIN:VAP:FLUSH WITH WATER FOR AT LEAST (ING 9)

Precautions for Safe Handling and Use


Report for NIIN: 013446534

Page 8
Control Measures

Respiratory Protection: RESP PROT IS NOT NEEDED IF CONC ARE CONTROLLED. IF CON EXCEED TLV (1000 PPM) USE A NIOSH/MSHA APPRVD RESP FOR ORGANIC VAP. IN VERY HIGH CONC, SCBA SHOULD BE USED.

Ventilation: LOCAL EXHAUST MAY BE NECESSARY TO REDUCE CONC BELOW TLV (1000 PPM).

Protective Gloves: CLOTH-LINED RUBBER GLOVES.

Eye Protection: CHEMICAL WORKERS GOGGLES (FP N).

Other Protective Equipment: PROTECTIVE CLOTHING SHOULD MIN EXPOSED SKIN & INCLUDE FULL FACE SHIELD IF SPLASHING IS POSSIBLE.

Work Hygienic Practices: NONE SPECIFIED BY MANUFACTURER.

Suppl. Safety & Health Data: MFR'S TRADE NAME/PART NO: FLUOROCARBON 12, CFC-12, R-12. MATL TO AVOID: ALKALI & ALKALINE EARTH METALS (I E SODIUM, POTASSIUM & BARIUM) IN THEIR FREE METALLIC FORM MAY REACT VIOLENTLY W/ FLUOROCARBONS. MATLS BECOME MORE REACTIVE WHEN FINELY GROUND. METALS SUCH AS MN & AL IN POWDER FORM MAY ALSO REACT, ESP AT HIGH TEMP.

Transportation Data

Transportation Action Code:
Transportation Focal Point: N
Trans Data Review Date: 93068
DOT PSN Code: MPU
DOT Symbol:
DOT Proper Shipping Name: REFRIGERANT GASES, N.O.S.
DOT Class: 2.2
DOT ID Number: UN1078
DOT Pack Group:
DOT Label: NONFLAMMABLE GAS
DOT/DoD Exemption Number:
IMO PSN Code: NAP
IMO Proper Shipping Name: REFRIGERANT GAS, N.O.S.
IMO UN Number: 1078
IMO UN Class: 2(2.2)
IMO Subsidiary Risk Label: -
IATA PSN Code: VQM
IATA UN ID Number: 1078
172556
IATA Proper Shipping Name: REFRIGERANT GAS, N.O.S. *
IATA UN Class: 2.2
IATA Subsidiary Risk Class:
IATA Label: NON-FLAMMABLE GAS
AFI PSN Code: VQM
AFI Symbols:
AFI Prop. Shipping Name: REFRIGERANT GASES, N.O.S.
AFI Class: 2.2
AFI ID Number: UN1078
AFI Pack Group:
AFI Label:
AFI Special Prov:
AFI Basic Pac Ref: 6-6,6-8

Report for NIIN: 013446534

MAMC Code:
N.O.S. Shipping Name:
Additional Trans Data:
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Disposal Data
======================================================================
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Disposal Data Action Code:
Disposal Data Focal Point:
Disposal Data Review Date:
Rec # For This Disp Entry:
Tot Disp Entries Per NSN:
Landfill Ban Item:
Disposal Supplemental Data:
1st EPA Haz Wst Code New:
1st EPA Haz Wst Name New:
1st EPA Haz Wst Char New:
1st EPA Acute Hazard New:
2nd EPA Haz Wst Code New:
2nd EPA Haz Wst Name New:
2nd EPA Haz Wst Char New:
2nd EPA Acute Hazard New:
3rd EPA Haz Wst Code New:
3rd EPA Haz Wst Name New:
3rd EPA Haz Wst Char New:
3rd EPA Acute Hazard New:
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Label Data
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Page 10
Label Required: YES
Technical Review Date: 15MAY92
Label Date: 12MAY92
MFR Label Number:
Label Status: G
Common Name: REFRIGERANT 12, FREON 12, GENETRON 12, (SUPDAT)
Chronic Hazard: YES
Signal Word: WARNING!
Acute Health Hazard-None:
Acute Health Hazard-Slight:
Acute Health Hazard-Moderate: X
Acute Health Hazard-Severe:
Contact Hazard-None:
Contact Hazard-Slight:
Contact Hazard-Moderate: X
Contact Hazard-Severe:
Fire Hazard-None: X
Fire Hazard-Slight:
Fire Hazard-Moderate:
Fire Hazard-Severe:
Reactivity Hazard-None:
Reactivity Hazard-Slight: X
Reactivity Hazard-Moderate:
Reactivity Hazard-Severe:
Special Hazard Precautions: AVOID CERTAIN ELASTOMERS, ALKALI/ALKALINE

Report for NIIN: 013446534

EARTH METALS, POWDERED ALUMINUM, ZINC, BERYLLIUM, ETC. ACUTE: INHAL MAY CAUSE RESPIRATORY/CARDIOVASCULAR EFFECTS, TINGLING SENSATION, HUMMING IN EARS, SLURRED SPEECH, DECREASED CONSCIOUSNESS, AMNESIA, IRREGULAR HEARTBEAT, ASPHYXIATION/DEATH. CONTACT W/ LIQUID WILL CAUSE FROSTBITE/ FREEZING, NECROSIS, BLANCHING, PAIN, TENDERNESS TO TISSUE. CHRONIC: MAY CAUSE SENSITIZATION TO INJECTED EPINEPHRINE CAUSING CARDIAC ARRHYTHMIA S.
Protect Eye: Y
Protect Skin: Y
Protect Respiratory: Y
Label Name: RACON INC
Label Street:
Label P.O. Box: 198
Label City: WICHITA
Label State: KS
Label Zip Code: 67201
Label Country: US
Label Emergency Number: 415-821-5338
Year Procured: