Product ID:D-5330NS MSDS Date:07/22/1998 FSC:9150 NIIN:00-163-9036 Status Code:A MSDS Number: CLJPW === Responsible Party === Company Name: ZIP-CHEM PRODUCTS/ MITANN INC DBA ZIP-CHEM PRODUCTS Address:400 JARVIS DR **City:MORGAN HILL** State:CA ZIP:95037 Country:US Info Phone Num:408-7 82-2500 Emergency Phone Num: (800) 424-9300 Chemtrec Ind/Phone:(800)424-9300 CAGE:1KQX9 === Contractor Identification === Company Name: ZIP-CHEM PRODUCTS/ MITANN INC DBA ZIP-CHEM PRODUCTS Address:400 JARVIS DR Box:City:MORGAN HILL State:CA ZIP:95037 Country:US Phone:408-782-2500 Contract Num:SP0450-01-M-LM79 CAGE:1KQX9

Ingred Name:MOLYBDENUM DISULFIDE CAS:1317-33-5 RTECS #:QA4697000 < Wt:5. OSHA PEL:15 MG/M3 ACGIH TLV:10 MG/ М3

Ingred Name:1,1-DIFLUOROETHANE CAS:75-37-6 RTECS #:KI1410000 Minumum % Wt:25. Maxumum % Wt:30. Other REC Limits:FLAMMABLE GAS ACGIH TLV:1000 PPM
Ingred Name:DIMETHYL ETHER CAS:115-10-6 RTECS #:PM4780000 Minumum % Wt:50. Maxumum % Wt:55. Other REC Limits:1000 PPM FLAMMABLE
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Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO Health Hazards Acute and Chronic:ACUTE: BREATHING HIGH CONCENTRATIONS OF VAPORS MAY CAUSE TEMP ORARY NERVOUS SYSTEM DEPRESSION WITH ANESTHETIC EFFECTS SUCH AS DIZZINESS, HEADACHE, OR NAUSEA. CHRONIC: PROLONGED EXPOSURE TO EXTREMELY HI GH CONCENTRATIONS OF THE VAPORS MAY LEAD TO NARCOSIS, CARDIAC IRREGULARITIES, UNCONSCIOUSNESS OR DEATH.
Effects of Overexposure:INHALATION-ACUTE: NAUSEA, DIZZINESS,&/OR HEART IRREGULARITIES MAY OCCUR FROM BREATHING HIGH CONCENTRATIONS. CHRONIC: BREATHING EXTREMELY HIGH CONCENTRATIONS OF THE VAPORS MAY LEAD TO ANESTHETIC EFFECT S S
UCH AS DIZZINESS, HEADACHE, OR NAUSEA. PROLONGED EXPOSURE TO EXTREMELY HIGH CONCENTRATIONS OF VAPORS MAY LEAD TO NARCOSIS, CARDIAC IRREGULARITIES, UNCONSCIOUSNESS OR DEATH. SKIN-ACUTE: MAY CAUE IRR ITAION OR BURNING SENSATION AS WELL AS FROSTBITE. CHRONIC: MAY CAUSE DERMATITIS. EYE: MAY CAUSE IRRITATION. INGESTION-ACUTE: MAY CAUSE NAUSEA OR VOMITING. Medical Cond Aggravated by Exposure:NONE KNOWN.

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d:DO NOT USE EPINEPHRINE IN CONJUNCTION WITH THIS MATERIAL. EYES: FLUSH IMMEDIATELY WITH WATER FOR 15 MINUTES AND TAKE TO PHYSICIAN. SKIN: WASH AFFECTED AREA, TREAT FOR FROSTBITE IF NECESSARY, AND CONSU LT A PHYSICIAN IF IRRITATION PERSISTS. INGESTION: CALL A PHYSICIAN AND/OR TRANSPORT TO EMERGENCY FACILITY IMMEDIATELY. DO NOT INDUCE VOMITING SO AS TO AVOID ASPIRATION OF MATERIAL INTO THE LUNGS. INHA LATION: REMOVE FROM EXPOSURE AND RESTORE BREATHING. SEEK MEDICAL ATT ENTION.

Flash Point:NOT DETERMINED Lower Limits:1.1% Upper Limits:19.0% Extinguishing Media:FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG. Fire Fighting Procedures:USE STANDARD FIREFIGHTING TECHNIQUES TO FIGHT FIRES INVOLVING THIS MATERIAL. Unusual Fire/Explosion Hazard:HAZARDOUS COMBUSTION PRODUCTS: HYDROCHLORIC AND HYDROFLUORIC ACIDS, CARBON MONOXIDE AND CARBON DIOXIDE, POSSIBLY CARBONYL HALIDES AT HIGH TEMPE RATURES.

Spill Release Procedures:FOR ALL TRANSPORTATION ACCIDENTS CALL CHEMTREC AT 1-800-424-9300. REPORTABLE QUANTITY: N/A. STOP SOURCE OF SPILL AS SOON AS POSSIBLE & NOTIFY APPROPRIATE PERSONNEL. BURM AROUND SPILL AREA TO PREVENT S PILL FROM SPREADING. VENTILATE AREA. DO NOT FLUSH INTO SEWERS. VAPORS MAY BE SUPPRESSED BY USE OF WATER FOG OR SPRAY. CONTAIN ALL LIQUID FOR TREATMENT OR NEUTRALIZATION. CONTA IN

FOR TREATMENT.

Handling and Storage Precautions:DO NOT TAKE INTERNALLY. AVOID CONTACT WITH EYES AND CLOTHING. UPON CONTACT WITH SKIN OR EYES WASH OFF WITH WATER. STORE IN A COOL, DRY, WELL-VENTILATED PLACE. STORE AT TEMPERATURES BELOW 120F. DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAMES.

Other Precautions: AVOID BREATHING VAPORS. VAPORS ARE HEAVIER THAN AIR AND WILL COLLECT IN LOW AREAS AND OTHER C ONFINED AREAS. SHELF LIFE LIMITATIONS: 36 MONTHS FROM DATE OF SHIPMENT.

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

Respiratory Protection: USE A DUST RESPIRATOR WHEN WORKING WITH THE ATOMIZED PRODUCT. BREATHING APPARATUS RECOMMENDED IF NECESSARY FOR APPLICATION. REFER TO NIOSH PUBLICATION NO. 89-105 AND NIOSH NO. 87-116. SEE OSHA REQUIRE MENT UNDER 29 CFR 1910.1025 AND 29 CFR 1910.134.

Ventilation:LOCAL OR MECHANICAL TO KEEP INGREDIENTS BELOW THEIR

EXPOSURE LIMITS.

PRODUCT CODE: 002059

## HCC:V3

Boiling Pt:B.P. Text:NOT DETERMINED Melt/Freeze Pt:M.P/F.P Text:NOT DETERMINED Decomp Temp:Decomp Text:NOT DETERMINED Vapor Pres:NOT DETERMIN ED Vapor Density:>AIR Spec Gravity:0.8 Evaporation Rate & amp; Reference:FASTER THAN ETHER Solubility in Water:NEGLIGIBLE Appearance and Odor:BLACK LIQUID; STRONG ODOR Percent Volatiles by Volume:85%

CONCENTRATED NITRIC AND SULFURIC ACIDS, STRONG OXIDIZERS, HALOGENS AND HALOGEN COMPOUNDS. Stability Condition to Avoid:TEMPERATURES ABOVE 120F (49C) Hazardous Decomposition Products:HYDROCHLORIC AND HYDROFLUORIC ACIDS, CARB

ON MONOXIDE AND CARBON DIOXIDE, POSSIBLY CARBONYL HALIDES AT HIGH TEMPERATURES.
Conditions to Avoid Polymerization:WILL NOT OCCUR.
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Toxicological Information:SEE HEALTH HAZARDS.
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Ecological:AQUATIC TOXICITY: NONE KNOWN OR REPORTED.
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Waste Disposal Methods:SPILLED MATERIAL COLLECTED IN ABS ORBENT MATERIAL
SHOULD BE TRANSFERRED TO STEEL DISPOSAL OR RECOVERY DRUMS. IF THIS PRODUCT BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A HAZARDOUS WASTE AS DEFIN ED UNDER 40 CFR 261(D). DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE & FEDERAL REGULATIONS.
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Transport Information:DOT PSN: CONSUMER COMMODITY, ORM-D
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<ul> <li>SARA Title III Information:</li> <li>CERCLA SECTION 103 (40CFR302.4): N SARA</li> <li>SECTION 302/304: NO EHS LISTED. SARA HAZARD CATEGORIES, SARA</li> <li>SECTIONS 311/312 (40CFR370.21): CLASSIFIED AS A HEALTH &amp; PHYSICAL</li> <li>HAZARD. SEC 313: THIS MATE RIAL DOES NOT CONTAIN CHEMICALS SUBJECT</li> <li>TO THE REPORTING REQUREMENTS OF SEC 313 &amp; 40CFR 372. AND CERCLA (40CFR 302).</li> <li>Federal Regulatory Information: TSCA INVENTORY STATUS: THE INGREDIENTS</li> <li>OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY. AND MITI (JAPAN).</li> <li>EINECS AND DSL 1</li> <li>NVENTORIES.</li> <li>State Regulatory Information: CALIFORNIA PROPOSITION 65 - THIS</li> <li>PRODUCTNOT KNOWN TO CONTAINS CHEMICALS KNOWN TO THE STATE OF</li> <li>CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS AND OTHER REPRODUCTIVE</li> <li>HARM. MASSACHUSETTS AND PENNSYLVANIA RIGH T TO KNOW HAZARDOUS</li> <li>SUBSTANCE LIST: MOLYBDENUM DISULFIDE, I,1-DIFLUOROETHANE AND</li> <li>DIMETHYL ETHER.</li> </ul>
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