Product ID:MIL-C-46168D PART B 4:1 BLEND MSDS Date:04/04/1990 FSC:8010 NIIN:01-141-2419 Kit Part:Y MSDS Number: BNWTC === Responsible Party === Company Name: NILES CHEMICAL PAINT CO Address:225 FORT ST Box:307 City:NILES State:MI ZIP:49120 Country:US Info Phone Num:616-683-3377 OR 219-236-5856 Emergency Phone Num:616-683-3377 OR 219-236-5856 Preparer' s Name: MICHAEL J LICHATOWICH CAGE:02388 === Contractor Identification === Company Name: NILES CHEMICAL PAINT Address:225 FORT STREET Box:307 City:NILES State:MI ZIP:49120 Country:US Phone:616-683-3377/219-236-5856 CAGE:02388

Ingred Name:HOMOPOLYMER OF HDI CAS:28182-81-2 RTECS #:NQ9170000 Fraction by Wt: 75% Other REC Limits:NONE SPECIFIED

Ingred Name:HEXAMETHYLENE DIISOCYANATE *(RESIDUAL MONOMER CONTENT LESS THAN 0.5%

BASED ON RESIN SOLIDS AT TIME OF MFR.** CAS:822-06-0 RTECS #:MO1740000 Fraction by Wt: * Other REC Limits:NONE SPECIFIED ACGIH TLV:0.005 PPM EPA Rpt Qty:1 LB DOT Rpt Qty:1 LB Ingred Name:**AFTER 3-6 MO STORAGE, THE FREE MONOMER CONTENT MAY RISE (MAX 1.6). MFR ALSO RECOMMENTS A CEILING LEVEL OF 0.02 PPM. RTECS #:9999992Z Other REC Limits:NONE SPECIFIED Ingred Name:XYLENE (SARA 313) (VAPOR PRESSURE 7.0 MM HG @ 20C) CAS:1330-20-7 RTECS #:ZE2100000 Fraction by Wt: 12.5% Other REC Limits:NONE SPECIFIED OSHA PEL:100 PPM ACGIH TLV:100 PPM/150 PPM STEL EPA Rpt Qty:1000 LBS DOT Rpt Qty:1000 LBS Ingred Name:N-BUTYL ACETATE (VAPOR PRESSURE 10 MM HG @ 20C) CAS:123-86-4 RTECS #:AF7350000 Fraction by Wt: 12.5% Other REC Limits:NONE SPECIFIED OSHA PEL:150 PPM ACGIH TLV:150 PPM/200 PPM STEL EPA Rpt Qty:5000 LBS

DOT Rpt Qty:5000 LBS

Ingred Name:VOC: 2.21 LB/GL RTECS #:9999999VO Other REC Limits:NONE SPECIFIED

LD50 LC50 Mix

ture:ORAL 4,300 MG/KG RAT. INHAL *** Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO Health Hazards Acute and Chronic: INHAL: IRRIT, REDUCED LUNG FUNCTION (BREATHING OBSTRUCTION), LUNG DAMAGE, BRONCHITIS, BRONCHIAL SPASM, PULMONARY EDEMA. CHEMICAL/HYPERSENSITIVE PNEUMONITIS. EYE, NOSE, THROAT IRRIT. HIGH CONC CAN CAUSE DEATH. SOME INDIVIDUALS MAY DEVELOP ISOCYANATE SENSITIZATION (LATER REACT W/EXPOS BELOW TLV). MORE INFORMATION ON FILE. Explanation of Carcinogenicity:N/K ***137 TO 1150 MG/M3 RAT. DERMAL >1,700 MG/KG RABBIT. Effects of Overexposure: BURNING SENSATION (NOSE, THROAT, LUNGS), RUNNY NOSE, SORE THROAT, COUGHING, WHEEZING, ASTHMATIC ATTACK, LUNG SENSITIVITY, CHEST DISCOMFORT, SHORTNESS OF BREATH, FEVER, CHILLS. DRYNESS (THROAT), TIGHTN ESS (CHEST). HEADACHE, NAUSEA, NARCOSIS, FATIGUE, LOSS OF APPETITE. REDNESS, RASH, SWELLING, SCALING, **BLISTERING. ****** Medical Cond Aggrava ted by Exposure: ASTHMA & OTHER RESPIRATORY DISORDERS (BRONCHITIS, EMPHYSEMA, HYPERREACTIVITY), SKIN ALLERGIES, ****LOSS OF ECZEMA. COORDINATION, LOSS OF INTELLECTUAL ABILITY. First Aid:INHAL:MOVE TO FRESH AIR. ADMIN OXYGEN/ARTIF RESP. CALL DR. ASTHMATIC SYMPTOMS? TREAT SYMPTOMATICALLY. CALL DR. SKIN:REMOV CONTAM CLOTH. WASH W/SOAP & WTR. SEVERE EXPOS, REMOVE CLOTH, GET UNDER SAFETY SHOWER. C ALL DR. LESSER EXPOS-CALL DR, IF IRRIT

DEVELOPS. EYE:FLUSH W/WTR 15 MIN, LIFT LIDS. REFER TO DR. INGEST:NO VOMIT. 1-2 CUPS MILK/WATER. NOTHING BY MOUTH UNCONSCIOUS/CONVULSING PERSON. CALL DR.

Flash Point Method:SCC Flash Point:91.0F,32.8C Lower Limits:1.0 Upper Limits:7.6 Extinguishing Media:FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL. Fire Fighting Procedures:FULL EMERG EQUIP (SCBA & FULL PROTECT CLOTH). DURING FIR E, HDI & OTHER TOXIC GASSES MAY BE GENERATED. ISOLATE FROM IGNIT SOURCE. CLSD CNTNR MAY EXPLODE W/HEAT.* Unusual Fire/Explosion Hazard:*CLSD CNTNR MAY BURST WHEN CONTAM W/WATER CREATING CO2. SOLVENT VAPOR HEAVIER THAN AIR, MAY TRAVEL ALONG GROUND TO IGNITION SOURCE & FLASHBACK TO VAPOR SOURCE. Spill Release Procedures: EVAC PEOPLE, REMOVE IGNIT SOURCES, VENT. DIKE/STOP SPILL. NOTIFY AUTHORITIES. COVER SPILL W/AB SORB/DECONTAM SOLUTION ON SPILL, LET REACT 10 MIN. COLLECT PROD IN CNTNR, COVER LOOSELY, STAND 24 HR. WASH SPILL W/DECOMTAM. RESPIRATOR PROTECT RECOMMENDED. Neutralizing Agent: DECONTAM SOLUTIONS: NONIONIC SURFACTANT TERGITOL TMN-10 (20%) WATER (80%);# Handling and Storage Precautions:STORAGE: MINIMUM -30F/122F MAX. KEEP FROM IGNITION SOURCE/HEAT. GRND CNTNRS DURING STORAGE/TRANSFER. STORE IN CLSD CNTNRS . DO NOT RESEAL IF CONTAM. Other Precautions: AVOID CONTACT W/SKIN & EYES. USE OF POS PRESS AIR SUPP RESP MAY BE NECESSARY FOR MIXING OR BRUSH APPLICATION. SEE ADDITIONAL INFORMATION ON FILE. FOLLOW LABEL INSTRUCT. #CONCENTRATED AMMONI A (3-8%) DETERGENT (2%) WATER (90-95%)

Respiratory Protection: RESPIRATOR RECOMM/APPROVED IN ISOCYANATE CONTAINING ENVIRONMENTS MAY BE NECESSARY. USE AIR PURIFYING RSPRTR

/POSITIVE PRESSURE SUPPLIED AIR RSPRTR APPROPRIATE FOR ISOCYANATE CONCENTRATIONS. SEE ORIGINA L MSDS ON FILE FOR FURTHER INFORMATION.

Ventilation:EXHAUST VENT SUFF TO KEEP AIRBORNE CONC OF HDI AND POLYISOCYANATE BELOW TLV. EXHAUST AIR MAY NEED TO BE CLEANED. Protective Gloves:CHEM RESISTANT GLOVES NITRILE, VITON ETC Eye Protection:SFTY GLASSES/SPLASH GOGGLES/FACE SHIELD Other Protective Equipment:COVER AS MUCH SKIN AS POSSIBLE W/APPROPRIATE

CLOTHES. IF SKIN CREAMS USED, KEEP AREA

PROTECTED BY ONLY CREAM TO MINIMUM.

Work Hygienic Practices: PRECAUTIONS TO AVOID SKIN/EYE CONTACT/BREATHE VAPOR. WASH CONTAM CLOTHING BEFORE REUSE. EYEWASH & SFTY SHOWERS NEEDED.

Supplemental Safety and Health

OVEREXPOSURE TO CHROMIUM SOLVENT HAS BEEN ASSOCIATED W/PERMANENT BRAIN/NERVOUS SYSTEM DAMAGE. SKIN: DEFATTING, DERMATITIS. SOLVENTS CAN PENETRATE SKIN & CAUSE SYSTEMIC EFFECTS. INGEST: IRRITATION & PO SSIBLE CORROSIVE ACTION IN MOUTH, INTEST TRACT. VOMITING (AS

PIRATION OF MAT'L) CAN RESULT IN CHEMICAL PNEUMONITIS.

HCC:F2 Vapor Density:> AIR Viscosity:183 MPAS @20C Evaporation Rate & amp; Reference:SLOWER ETHER (BU AC=1) Solubility in Water:INSOL/REACTS W/WATER Appearance and Odor:CLEAR TO PALE YELLOW LIQUID/SOLVENT ODOR Percent Volatiles by Volume:CA 30

Stability Indicator/Materials to Avoid:YES

WATER, AMINES, STR

ONG BASES, ALCOHOLS, METAL COMPOUNDS, AND SURFACE

ACTIVE MATERIALS.

Stability Condition to Avoid:MOISTURE, HIGH TEMPERATURES, SHOCK FROM DROPPING.

 Hazardous Decomposition Products:BY HIGH HEAT AND FIRE: CARBON DIOXIDE, CARBON MONOXIDE, OXIDES OF NITROGEN, TRACES OF HCN AND HDI.
Conditions to Avoid Polymerization:MAY OCCUR IF IN CONTACT W/MOISTURE OR OTHER MATERIALS WHICH REACT W/ISOCYANATES. MAY OCCUR AT TEMPERATURES OVER 400 F.

====== Disposal Considerations

=======================

Waste Disposal Methods:DISPOSE IN ACCORDANCE W/FEDERAL, STATE & LOCAL ENVIRONMNTL CNTRL REGS. INCINERATION PREFERRED. IGNITABLE HAZARDOUS WASTE (PROD RESIDUE/FLAMMABLE SOLVENT VAPOR). DECONTAMINATE CNTNRS PRIOR TO DISPOSAL. DON'T HEAT/CUT ON OR NEAR EMPTY CNTNRS.

Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner wh

atsoever,

expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.