

SAFETY DATA SHEET

FP501B00

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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

MANUFACTURER'S NAME / ADDRESS

ARIZONA POLYMER FLOORING
4565 W WATKINS ST.
PHOENIX, AZ 85043 .

TRADE NAME: POLYURETHANE 501 PART B
COLOR: CLEAR
MAIN USE: SPECIALTY FLOORING CURATIVE

EMERGENCY TELEPHONE NUMBER: (800) 424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

GLOBALLY HARMONIZED SYSTEM (GHS)

CLASSIFICATION:

FLAMMABLE LIQUIDS: CATEGORY 3
ACUTE TOXICITY: CATEGORY 4 (INHALATION-MIST)
EYE DAMAGE: CATEGORY 1
RESPIRATORY SENSITIZATION: CATEGORY 1
SKIN SENSITIZATION: CATEGORY 1
ACUTE AQUATIC TOXICITY: CATEGORY 2
CHRONIC AQUATIC TOXICITY: CATERGORY 3

GHS LABEL ELEMENTS

HAZARD PICTOGRAMS



SIGNAL WORD: DANGER!

HAZARD STATEMENTS:

H226: FLAMMABLE LIQUID AND VAPOR
H332: HARMFUL IF INHALED
H318: CAUSES SERIOUS EYE DAMAGE
H334: MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED
H317: MAY CAUSE AN ALLERGIC SKIN REACTION
H304: MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAY
H335: MAY CAUSE RESPIRATORY IRRITATION
H412: HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS

PRECAUTIONARY STATEMENTS:

PREVENTION

P280: WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE PROTECTION/ FACE PROTECTION
P271: USE ONLY OUTDOORS OR IN WELL VENTILATED AREA
P260: DO NOT BREATHE MIST/VAPORS/SPRAY
P210: KEEP AWAY FROM HEAT, SPARKS, OPEN FLAMES, AND HOT SURFACES. NO SMOKING
P273: AVOID RELEASE TO THE ENVIRONMENT
P284: (IN CASE OF INADEQUATE VENTILATION) WEAR RESPIRATORY PROTECTION.
P240: GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT
P241: USE EXPLOSION-PROOF ELECTRICAL, VENTILATING AND LIGHTING EQUIPMENT

HIGH PERFORMANCE CONCRETE COATING SYSTEM

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SECTION 2: HAZARDS IDENTIFICATION CON'T.

P242: USE ONLY NON-SPARKING TOOLS
 P243: TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE
 P272: CONTAMINATED WORK CLOTHING SHOULD NOT BE ALLOWED OUT OF THE WORKPLACE

RESPONSE

P303+P361+353: **IF ON SKIN (OR HAIR):** REMOVE/TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/SHOWER
 P333+P311: **IF SKIN IRRITATION OR RASH OCCURS:** CALL A POISON CENTER OR DOCTOR/PHYSICIAN
 P305+P351+P338: **IF IN EYES:** RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO SO. CONTINUE RINSING.
 P337+P313: **IF EYE IRRITATION PERSISTS:** GET MEDICAL ADVICE/ATTENTION
 P304+P340: **IF INHALED:** REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING
 P362+P364: TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE REUSE.
 P370+P378: **IN CASE OF FIRE:** USE DRY CHEMICAL, CARBON DIOXIDE (CO₂), FOAM, OR WATER SPRAY (FOR LARGE FIRES) TO EXTINGUISH

STORAGE

P403+P235: STORE IN A WELL-VENTILATED PLACE. KEEP COOL
 P233: KEEP CONTAINER TIGHTLY CLOSED

DISPOSAL

P501: DISPOSE OF CONTENTS/CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT

OTHER HAZARDS

NO DATA AVAILABLE

EMERGENCY OVERVIEW:

DANGER!
 HARMFUL IF INHALED
 RESPIRATORY SENSITIZER
 MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION
 CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING
 ORGANS: BLOOD, KIDNEYS, LIVER, GASTROINTESTINAL TRACT,
 RESPIRATORY TRACT, SKIN, NERVOUS SYSTEM, EYE, LENS OR CORNEA
 FLAMMABLE LIQUID AND VAPOR
 VAPOR MAY CAUSE FLASH FIRE
 SKIN SENSITIZER

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| HAZARDOUS INGREDIENTS | Wt. % | CAS Number |
|---|--------------|-------------------|
| HOMOPOLYMER OF HEXAMETHYLENE DIISOCYANATE | 40-70 | 028182-81-2 |
| HOMOPOLYMER OF ISOPHORONE DIISOCYANATE | 7-15 | 053880-05-0 |
| DIPROPYLENE GLYCOL MONOMETHYL ETHER ACETATE | 7-15 | 088917-22-0 |
| BUTYL ACETATE | 5-10 | 000123-86-4 |
| POLYOXYETHYLENE TRIDECYL ETHER PHOSPHATE | 1-5 | 009046-01-9 |
| DIMETHYLCYCLOHEXYLAMINE | 1-5 | 000098-94-2 |
| HEXAMETHYLENE-1,6- DIISOCYANATE | 0.1-1.0 | 000822-06-0 |
| ISOPHORONE DIISOCYANATE | 0.1-1.0 | 004098-71-9 |

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SECTION 4: FIRST AID MEASURES

GENERAL: REMOVE PERSON FROM AFFECTED AREA AND MAKE COMFORTABLE. TREAT SYMPTOMATICALLY.

EYES: FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION.

SKIN: REMOVE PRODUCT AND FLUSH AFFECTED AREA WITH WATER FOR 15 MINUTES. IF IRRITATION PERSISTS GET MEDICAL ATTENTION.

INHALATION: MOVE TO FRESH AIR. GIVE ASSISTED RESPIRATION IF BREATHING HAS STOPPED OR IS LABORED (CALL A PHYSICIAN).

INGESTION: GIVE 3 – 4 GLASSES OF WATER OR MILK IF PERSON CONSCIOUS. **DO NOT INDUCE VOMITING!** OBTAIN MEDICAL CARE AND TREATMENT.

NOTES TO PHYSICIAN:

EYES: STAIN FOR EVIDENCE OF CORNEAL INJURY. IF CORNEA IS BURNED, INSTILL ANTIBIOTIC/STEROID PREPARATION AS NEEDED. WORKPLACE VAPORS COULD PRODUCE REVERSIBLE CORNEAL EPITHELIAL EDEMA IMPAIRING VISION.

SKIN: THIS COMPOUND IS A SKIN SENSITIZER. TREAT SYMPTOMATICALLY AS FOR CONTACT DERMATITIS OR THERMAL BURN.

INGESTION: TREAT SYMPTOMATICALLY. THERE IS NO SPECIFIC ANTIDOTE. INDUCING VOMITING IS CONTRAINDICATED BECAUSE OF THE IRRITATING NATURE OF THE COMPOUND.

INHALATION: TREATMENT IS ESSENTIALLY SYMPTOMATIC. AN INDIVIDUAL HAVING A DERMAL OR PULMONARY SENSITIZATION REACTION TO THIS MATERIAL SHOULD BE REMOVED FROM FURTHER EXPOSURE TO ANY ISOCYANATE.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: 40°C (104°F) TCC (BUTYL ACETATE)

CONDITIONS OF FLAMMABILITY: NA

FLAMMABLE LIMITS: LEL: 1.7%

UEL: 7.6%

AUTO IGNITION TEMP.: ND

OSHA CLASS: FLAMMABLE LIQUID, PACKING GROUP III

HAZARDOUS COMBUSTION PRODUCTS: CO, CO₂, ALDEHYDES, ACIDS

SENSITIVITY TO IMPACT: ND

SENSITIVITY TO STATIC DISCHARGE: ND

EXTINGUISHING MEDIA: IGNITION MAY GIVE RISE TO A CLASS B FIRE. IN CASE OF FIRE USE: WATER FOG, CARBON DIOXIDE, DRY CHEMICAL, ALCOHOL FOAM.

SPECIAL FIRE FIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING. WATER SPRAY IS USEFUL IN COOLING FIRE-EXPOSED VESSELS AND IN DISPERSING VAPORS.

UNUSUAL FIRE AND EXPLOSIVE HAZARDS: MAY GENERATE TOXIC OR IRRITATING COMBUSTION PRODUCTS. SUDDEN REACTION AND FIRE MAY RESULT IF PRODUCT IS MIXED WITH AN OXIDIZING AGENT. SOLVENT VAPORS MAY BE HEAVIER THAN AIR. UNDER CONDITIONS OF STAGNANT AIR, VAPORS MAY BUILD UP AND TRAVEL ALONG THE GROUND TO AN IGNITION SOURCE.

SECTION 6: ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: EVACUATE NON-ESSENTIAL PERSONNEL. SHUT OFF SOURCES OF IGNITION. PUT ON PERSONAL PROTECTIVE EQUIPMENT. CONTROL SOURCE OF LEAK. VENTILATE. CONTAIN THE SPILL TO PREVENT SPREAD TO DRAINS, SEWERS, WATER SUPPLIES, OR SOIL. POUR DECONTAMINATION SOLUTION OVER SPILL AND ALLOW TO REACT FOR AT LEAST 15 MINUTES. COLLECT MATERIAL IN OPEN CONTAINERS WITH FURTHER AMOUNTS OF DECONTAMINATION SOLUTION. WASH DOWN SPILL AREA WITH DECONTAMINATION SOLUTION.



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SECTION 6: ACCIDENTAL RELEASE MEASURES CON'T.

DECONTAMINATION SOLUTIONS: COLORIMETRIC LABORATORIES INC. (CLI) DECONTAMINATION SOLUTION OR 20% NON-IONIC SURFACTANT (TERGITOL TMN-10) WITH 80% WATER.

SECTION 7: HANDLING AND STORAGE

GENERAL: STORE IN COOL, WELL VENTILATED AREAS. KEEP AWAY FROM HEAT AND OPEN FLAMES. AVOID PROLONGED INHALATION OF HEATED VAPORS OR MISTS. AVOID PROLONGED SKIN CONTACT. USE NON-SPARKING TOOLS AND GROUNDING CABLES WHEN TRANSFERRING. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY.

STORAGE: AVOID TEMPERATURE EXTREMES. STORE AWAY FROM EXCESSIVE HEAT, FROM SOURCES OF IGNITION AND FROM REACTIVE MATERIALS. MATERIAL CAN BURN; LIMIT INDOOR STORAGE TO AREAS EQUIPPED WITH AUTOMATIC SPRINKLERS. STORE OUT OF DIRECT SUNLIGHT IN A COOL PLACE. KEEP CONTAINERS TIGHTLY CLOSED. GROUND ALL METAL CONTAINERS DURING STORAGE AND HANDLING.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

| INGREDIENTS (CAS) | <u>EXPOSURE LIMITS (ppm)</u> | | | | OTHER |
|-------------------|------------------------------|------|-------|------|-------|
| | OSHA | | ACGIH | | |
| | TWA | STEL | TWA | STEL | |
| 028182-81-2 | NE | NE | NE | NE | |
| 053880-05-0 | NE | NE | NE | NE | |
| 088917-22-0 | NE | NE | NE | NE | |
| 000123-86-4 | 150 | 200 | 150 | 200 | |
| 009046-01-9 | NE | NE | NE | NE | |
| 000098-94-2 | NE | NE | NE | NE | |
| 000822-06-0 | 0.005 | .02 | 0.005 | NE | |
| 004098-71-9 | 0.005 | .02 | 0.005 | NE | |

LEGEND: (M) MAX. EXPOSURE LIMIT; (S) OCCUPATIONAL EXP. LIMIT; (R) SUPPLIERS REC. LIMIT, (+) PERCUTANEOUS RISK
 NOTE 1: VALUES MEANINGFUL ONLY WHEN HARDENED PRODUCT IS ABRADED, GROUND, ETC.

ENGINEERING CONTROLS: EXHAUST VENTILATION SUFFICIENT TO KEEP AIRBORNE CONCENTRATION OF THE SOLVENTS BELOW THEIR RESPECTIVE TLV'S. EXHAUST AIR MAY NEED TO BE CLEANED BY SCRUBBERS OR FILTERS TO REDUCE ENVIRONMENTAL CONTAMINATION.

PROTECTIVE GLOVES: NITRILE RUBBER

EYE PROTECTION: SPLASH-PROOF GOGGLES OR CHEMICAL SAFETY GLASSES

RESPIRATORY PROTECTION: A RESPIRATOR THAT IS RECOMMENDED FOR USE IN ISOCYANATE CONTAINING ENVIRONMENTS (AIR PURIFYING OR FRESH AIR SUPPLIED) MAY BE NECESSARY FOR SPRAY APPLICATIONS OR OTHER SITUATIONS SUCH AS HIGH TEMPERATURE USE WHICH MAY PRODUCE INHALATION EXPOSURES. A SUPPLIED AIR RESPIRATOR (EITHER POSITIVE PRESSURE TYPE OR CONTINUOUS FLOW TYPE) IS RECOMMENDED. BEFORE AN AIR PURIFYING RESPIRATOR CAN BE USED, AIR MONITORING MUST BE PERFORMED TO DETERMINE THE AIRBORNE CONCENTRATIONS OF HDI MONOMER, HDI POLYISOCYANATE AND ORGANIC SOLVENTS.

OTHER PROTECTIVE EQUIPMENT: LONG SLEEVED SHIRTS AND TROUSERS. EMERGENCY SHOWERS AND EYE WASH STATIONS SHOULD BE READILY ACCESSIBLE.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| BOILING POINT: >127°C (260°F) | SPECIFIC GRAVITY: 1.10-1.20 |
| VAPOR PRESSURE: 3.7mmHg @ 20°C (68°F) | MELTING POINT: ND |
| VAPOR DENSITY: ND (AIR = 1) | EVAPORATION RATE: 1 (BUTYL ACETATE = 1) |
| SOLUBILITY IN WATER: INSOLUBLE, REACTS SLOWLY WITH WATER TO LIBERATE CO ₂ GAS | |
| COEFFICIENT of WATER/OIL DISTRIBUTION: ND | ODOR THRESHOLD: ND |
| APPEARANCE AND ODOR: CLEAR LIQUID, SWEET SOLVENT ODOR | |
| % VOLATILES BY VOLUME: 14% | %SOLIDS BY WEIGHT: 89% |

SECTION 10: STABILITY AND REACTIVITY

STABILITY: STABLE; HOWEVER MAY FORM PEROXIDES OF UNKNOWN STABILITY

CONDITIONS TO AVOID: NOT APPLICABLE (MATERIAL IS STABLE).

INCOMPATIBILITY (MATERIALS TO AVOID)- WATER, AMINES, STRONG BASES, ALCOHOLS, METAL COMPOUNDS AND SURFACE ACTIVE MATERIALS.

HAZARDOUS DECOMPOSITION PRODUCTS: BY HIGH HEAT AND FIRE; CO, CO₂, OXIDES OF NITROGEN, HCN, HDI.

HAZARDOUS POLYMERIZATION (REACTIVITY): MAY OCCUR. CONTACT WITH MOISTURE OR OTHER MATERIALS THAT REACT WITH ISOCYANATES OR TEMPERATURES OVER 400F (204C) MAY CAUSE POLYMERIZATION.

SECTION 11: TOXICOLOGICAL INFORMATION

PRIMARY ROUTES OF ENTRY: EYE CONTACT, SKIN CONTACT, INHALATION, INGESTION.

HEALTH HAZARDS (ACUTE AND CHRONIC EXPOSURES)

EYES:

ACUTE –VAPORS ARE IRRITATING AND CAN CAUSE PAIN, TEARING, REDDENING AND SWELLING. IF LEFT UNTREATED, CORNEAL DAMAGE CAN OCCUR AND INJURY IS SLOW TO HEAL. HOWEVER DAMAGE IS USUALLY REVERSIBLE

CHRONIC – MAY RESULT IN CORNEAL OPACITY. PROLONGED VAPOR CONTACT MAY CAUSE CONJUNCTIVITIS.

SKIN CONTACT:

ACUTE – ISOCYANATES REACT WITH SKIN PROTEIN AND MOISTURE AND CAN CAUSE IRRITATION. SYMPTOMS OF SKIN IRRITATION MAY BE REDDENING, SWELLING, RASH, SCALING OR BLISTERING. SOME PERSONS MAY DEVELOP SKIN SENSITIZATION FROM SKIN CONTACT. CURED MATERIAL IS DIFFICULT TO REMOVE. REPEATED OR PROLONGED SKIN CONTACT WITH SOLVENTS CAN RESULT IN DRY, DEFATTED AND CRACKED SKIN CAUSING INCREASED SUSCEPTIBILITY TO INFECTION. IN ADDITION IRRITATION MAY DEVELOP INTO DERMATITIS. SOLVENTS CAN PENETRATE THE SKIN AND MAY CAUSE EFFECTS SIMILAR TO THOSE IDENTIFIED UNDER ACUTE INHALATION SYMPTOMS.

CHRONIC – PROLONGED CONTACT WITH ISOCYANATES CAN CAUSE REDDENING, SWELLING, RASH, SCALING OR BLISTERING. IN THOSE WHO HAVE DEVELOPED A SKIN SENSITIZATION, THESE SYMPTOMS CAN DEVELOP AS A RESULT OF CONTACT WITH VERY SMALL AMOUNTS OF LIQUID OR EVEN AS A RESULT OF VAPOR-ONLY EXPOSURE. SOLVENTS CAN PENETRATE THE SKIN AND MAY CAUSE SYSTEMIC EFFECTS SIMILAR TO THOSE IDENTIFIED UNDER CHRONIC INHALATION EFFECTS.

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SECTION 11: TOXICOLOGICAL INFORMATION CON'T.

SKIN ABSORPTION:

ACUTE—ND

CHRONIC— ND

INHALATION:

ACUTE –HDI AEROSOLS OR VAPORS AT CONCENTRATIONS ABOVE THE APPLICABLE EXPOSURE LIMITS CAN IRRITATE THE MUCOUS MEMBRANES IN THE RESPIRATORY TRACT CAUSING RUNNY NOSE, SORE THROAT, COUGHING, CHEST DISCOMFORT, SHORTNESS OF BREATH AND REDUCED LUNG FUNCTION. PERSONS WITH PRE-EXISTING NONSPECIFIC BRONCHIAL HYPER REACTIVITY CAN RESPOND TO CONCENTRATIONS BELOW THE EXPOSURE LIMITS WITH SIMILAR SYMPTOMS AS WELL AS AN ASTHMA ATTACK. EXPOSURE WELL ABOVE THE EXPOSURE LIMITS MAY LEAD TO BRONCHITIS, BRONCHIAL SPASM AND PULMONARY EDEMA. CHEMICAL OR HYPERSENSITIVE PNEUMONITIS HAS ALSO BEEN REPORTED. SOLVENT VAPORS ARE IRRITATING TO THE EYES NOSE AND THROAT. SYMPTOMS OF IRRITATION MAY INCLUDE RED, ITCHY EYES, DRYNESS OF THE THROAT AND A FEELING OF TIGHTNESS IN THE CHEST. OTHER POSSIBLE SYMPTOMS OF OVEREXPOSURE INCLUDE: HEADACHE, DIZZINESS, NAUSEA, NARCOSIS, FATIGUE AND LOSS OF APPETITE.

CHRONIC – AS A RESULT OF PREVIOUS REPEATED OVEREXPOSURES OR A SINGLE LARGE DOSE, CERTAIN INDIVIDUALS WILL DEVELOP ISOCYANTE SENSITIZATION (CHEMICAL ASTHMA) WHICH WILL CAUSE THEM TO REACT TO A LATER EXPOSURE TO ISOCYANATES AT LEVELS WELL BELOW APPLICABLE EXPOSURE LIMITS. THESE SYMPTOMS, WHICH INCLUDE CHEST TIGHTNESS, WHEEZING, COUGH, SHORTNESS OF BREATH OR ASTHMATIC ATTACK, COULD BE IMMEDIATE OR DELAYED UP TO SEVERAL HOURS AFTER EXPOSURE. SIMILAR TO MANY NON-SPECIFIC ASTHMATIC RESPONSES, THERE ARE REPORTS THAT ONCE SENSITIZED AN INDIVIDUAL CAN EXPERIENCE THESE SYMPTOMS UPON EXPOSURE TO DUST, COLD AIR OR OTHER IRRITANTS. THIS INCREASED LUNG SENSITIVITY CAN PERSIST FOR WEEKS AND IN SEVERE CASES FOR SEVERAL YEARS.

CHRONIC OVEREXPOSURE TO ISOCYANTES HAS ALSO BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING DECREASE IN LUNG FUNCTION, WHICH MAY BE PERMANENT. SENSITIZATION MAY BE EITHER TEMPORARY OR PERMANENT. CHRONIC EXPOSURE TO ORGANIC SOLVENTS HAS BEEN ASSOCIATED WITH VARIOUS NEUROTOXIC EFFECTS INCLUDING PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. SYMPTOMS INCLUDE LOSS OF MEMORY, LOSS OF INTELLECTUAL ABILITY AND LOSS OF COORDINATION.

INGESTION:

ACUTE – CAN RESULT IN IRRITATION AND POSSIBLE CORROSIVE ACTION IN THE MOUTH, STOMACH TISSUE AND DIGESTIVE TRACT. SYMPTOMS CAN INCLUDE SORE THROAT, ABDOMINAL PAIN, NAUSEA, VOMITING AND DIARRHEA. VOMITING MAY CAUSE ASPIRATION OF SOLVENT RESULTING IN CHEMICAL PNEUMONITIS

CHRONIC -- ND

CONDITIONS AGGRAVATED BY EXPOSURE: ASTHMA AND OTHER RESPIRATORY DISORDERS, SKIN ALLERGIES, ECZEMA

ACUTE TOXICITY: NO DATA ON THE PRODUCT ITSELF

ACUTE ORAL TOXICITY- COMPONENTS

| | | |
|--|--------------------|--------------|
| HOMOPOLYMER OF HEXAMETHYLENE-1,6- DIISOCYANATE | LD50: >2500mg/kg | SPECIES: RAT |
| HOMOPOLYMER OF ISOPHORONE DIISOCYANATE | LD50: >14000 mg/kg | SPECIES: RAT |
| DIPROPYLENE GLYCOL MONOMETHYL ETHER ACETATE | LD50: >5000 mg/kg | SPECIES: RAT |
| N BUTYL ACETATE | ND | |
| CYCLOHEXYLDIMETHYLAMINE | LD50: 272 mg/kg | SPECIES: RAT |
| HEXAMETHYLENE-1,6-DIISOCYANATE | LD50: 746 mg/kg | SPECIES: RAT |
| ISOPHORONE DIISOCYANATE | LD50: 4814 mg/kg | SPECIES: RAT |

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ACUTE DERMAL TOXICITY- COMPONENTS

| | | |
|--|-------------------|--------------|
| HOMOPOLYMER OF HEXAMETHYLENE-1,6- DIISOCYANATE | LD50: >2000mg/kg | SPECIES: RAT |
| HOMOPOLYMER OF ISOPHORONE DIISOCYANATE | ND | |
| DIPROPYLENE GLYCOL MONOMETHYL ETHER ACETATE | LD50: >2000mg/kg | SPECIES: RAT |
| N BUTYL ACETATE | LD50: >5000 mg/kg | SPECIES: RAT |
| CYCLOHEXYLDIMETHYLAMINE | LD50: 370 mg/kg | SPECIES: RAT |
| HEXAMETHYLENE-1,6-DIISOCYANATE | LD50: >7000 mg/kg | SPECIES: RAT |
| ISOPHORONE DIISOCYANATE | LD50: >7000 mg/kg | SPECIES: RAT |

ACUTE INHALATION TOXICITY- COMPONENTS

| | | |
|--|---------------------|--------------|
| HOMOPOLYMER OF HEXAMETHYLENE-1,6- DIISOCYANATE | LC50/4H: 0.390 mg/l | SPECIES: RAT |
| HOMOPOLYMER OF ISOPHORONE DIISOCYANATE | LC50/4H: 50 mg/l | SPECIES: RAT |
| DIPROPYLENE GLYCOL MONOMETHYL ETHER ACETATE | LC50/4H: 5.7 mg/l | SPECIES: RAT |
| N BUTYL ACETATE | LC50/4H: >21mg/l | SPECIES: RAT |
| CYCLOHEXYLDIMETHYLAMINE | LC50/4H: 4.45 mg/l | SPECIES: RAT |
| HEXAMETHYLENE-1,6-DIISOCYANATE | LC50/4H: 0.124 mg/l | SPECIES: RAT |
| ISOPHORONE DIISOCYANATE | LC50/4H: 0.03 mg/l | SPECIES: RAT |

OECD TEST GUIDELINE 403

SKIN CORROSION/IRRITATION

DOT SKIN CORROSION STUDY: CORROSIVE IN ALL RABBITS AT 3 MINUTES EXPOSURE

SERIOUS EYE DAMAGE/EYE IRRITATION

SEVERE EYE IRRITATION

SENSITIZATION

PULMONARY AND DERMAL SENSITIZER IN ANIMALS AND HUMANS. EVIDENCE EXISTS THAT CROSS SENSITIZATION BETWEEN HDI AND OTHER ISOCYANATES, PARTICULARLY HYDROGENATED MDI AND TDI, CAN OCCUR.

SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (SINGLE EXPOSURE)

CATEGORY 3 (IRRITATING TO RESPIRATORY SYSTEM)

CARCINOGENIC DATA: NTP: NONE

OSHA: NONE

IARC: NONE

TERATOGENICITY: NO

MUTAGENICITY: NO

EMBRYOTOXICITY: NO

SYNERGISTIC MATERIAL: NO

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY

AQUATIC TOXICITY: NO DATA ON THE PRODUCT ITSELF. BASED ON THE COMPONENTS THE PRODUCT IS ACUTELY HARMFUL FOR AQUATIC ORGANISMS.

ACUTE TOXICITY TO FISH- COMPONENTS

| | | |
|--|---------------------------|-------------------------|
| HOMOPOLYMER OF HEXAMETHYLENE-1,6- DIISOCYANATE | LC50 (96 HRS): 100 mg/l | SPECIES: FATHEAD MINNOW |
| HOMOPOLYMER OF ISOPHORONE DIISOCYANATE | LC50 (96 HRS): 1.51 mg/l | SPECIES: FISH |
| DIPROPYLENE GLYCOL MONOMETHYL ETHER ACETATE | LC50 (96 HRS): 151 mg/l | SPECIES: FATHEAD MINNOW |
| N BUTYL ACETATE | LC50 (96 HRS): 18 mg/l | SPECIES: FISH |
| CYCLOHEXYLDIMETHYLAMINE | LC50 (96 HRS): 22-46 mg/l | SPECIES: FISH |

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ACUTE TOXICITY TO FISH- COMPONENTS

| | |
|---------------------------------|----------------------------|
| HEXAMETHYLENE-1,6- DIISOCYANATE | LC50 (96 HRS): ≥82.8 mg/l |
| | SPECIES: BRACHYDANIO RERIO |
| ISOPHORONE DIISOCYANATE | LC50 (96 HRS): >72 mg/l |
| | SPECIES: BRACHYDANIO RERIO |

ACUTE TOXICITY TO AQUATIC INVERTEBRATES: COMPONENTS

| | |
|--|----------------------------|
| HOMOPOLYMER OF HEXAMETHYLENE-1,6- DIISOCYANATE | EC50 (48 HRS): 127 mg/l |
| | SPECIES: DAPHNIA MAGNA |
| HOMOPOLYMER OF ISOPHORONE DIISOCYANATE | EC50 (48 HRS): 3.36 mg/l |
| | SPECIES: DAPHNIA MAGNA |
| DIPROPYLENE GLYCOL MONOMETHYL ETHER ACETATE | EC50 (48 HRS): 2701 mg/l |
| | SPECIES: DAPHNIA MAGNA |
| N BUTYL ACETATE | ND |
| CYCLOHEXYLDIMETHYLAMINE | EC50 (48 HRS): 75 mg/l |
| | SPECIES: DAPHNIA MAGNA |
| HEXAMETHYLENE-1,6- DIISOCYANATE | EC50 (48 HRS): ≥ 89.1 mg/l |
| | SPECIES: DAPHNIA MAGNA |
| ISOPHORONE DIISOCYANATE | LC50 (48 HRS): 27 mg/l |
| | SPECIES: DAPHNIA MAGNA |

ACUTE TOXICITY TO ALGAE/AQUATIC PLANTS: COMPONENTS

| | |
|--|----------------------------------|
| HOMOPOLYMER OF HEXAMETHYLENE-1,6- DIISOCYANATE | EC50 (72 HRS): >1000 mg/l |
| | SPECIES: DESMODESMUS SUBSPICATUS |
| HOMOPOLYMER OF ISOPHORONE DIISOCYANATE | EC50 (72 HRS): >10000 mg/l |
| | SPECIES: DESMODESMUS SUBSPICATUS |
| DIPROPYLENE GLYCOL MONOMETHYL ETHER ACETATE | EC50 (72 HRS): >1000 mg/l |
| | SPECIES: GREEN ALGAE |
| N BUTYL ACETATE | EC50 (72 HRS): 674.7 mg/l |
| | SPECIES: DESMODESMUS SUBSPICATUS |
| CYCLOHEXYLDIMETHYLAMINE | EC50 (72HRS): >2 mg/l |
| | SPECIES: ALGAE |
| HEXAMETHYLENE-1,6- DIISOCYANATE | EC50 (72HRS): >77.4 mg/l |
| | SPECIES: DESMODESMUS SUBSPICATUS |
| ISOPHORONE DIISOCYANATE | LC50 (72 HRS): >70 mg/l |
| | SPECIES: DESMODESMUS SUBSPICATUS |

TOXICITY TO BACTERIA: COMPONENTS

| | | |
|---------------------------------|-----------------|------------------|
| HEXAMETHYLENE-1,6- DIISOCYANATE | EC50: > 880mg/l | ACTIVATED SLUDGE |
|---------------------------------|-----------------|------------------|

CHRONIC AQUATIC TOXICITY

CHRONIC TOXICITY TO AQUATIC INVERTEBRATES

LONG LASTING ADVERSE EFFECTS TO AQUATIC ORGANISMS

PERSISTANCE AND DEGRADABILITY

BIODEGRADABILITY: NOT READILY BIODEGRADABLE (BY OECD CRITERIA)

BIOACCUMULATIVE POTENTIAL

BIOACCUMULATION: ND

PARTITION COEFFICIENT: N-OCTANOL/WATER(LOG P_{ow}): ND

MOBILITY IN SOIL

ND



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SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: INCINERATION IS PREFERRED. THIS PRODUCT SHOULD NOT BE ALLOWED TO ENTER DRAINS, WATER COURSES OR THE SOIL. PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 14: TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: UN1866, RESIN SOLUTION, FLAMMABLE, (CONTAINS BUTYL ACETATE), 3, PG III

HAZARD LABEL: FLAMMABLE LIQUID

HAZARD PLACARD: FLAMMABLE LIQUID

IMO SHIPPING DATA: UN1866, RESIN SOLUTION, FLAMMABLE, (CONTAINS BUTYL ACETATE), 3, PG III,

ICAO/IATA SHIPPING DATA: UN1866, RESIN SOLUTION, FLAMMABLE, (CONTAINS BUTYL ACETATE), 3, PG III

PASSENGER AIR MAX QUANTITY: 60L

PASSENGER PACKING INSTRUCTION: 309

CARGO AIR- MAX QUANTITY: 220L

CARGO AIR INSTRUCTION NUMBER: 310

SECTION 15: REGULATORY INFORMATION

VOC: COMPONENT = 125 gms/Liter

AS APPLIED (Part of a multi-component system) = 50 gms/Liter

TSCA (TOXIC SUBSTANCE CONTROL ACT): ALL COMPONENTS ARE LISTED IN THE TSCA CHEMICAL SUBSTANCE INVENTORY.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION and LIABILITY ACT): REPORTABLE QUANTITY, BUTYL ACETATE 5000 LBS., HDI 100 LBS., IPDI 500 LBS.

SARA TITLE III

SECTION 312 HAZARD CLASS: IMMEDIATE (ACUTE) HEALTH HAZARD, DELAYED HEALTH HAZARD; FIRE HAZARD.

SECTION 313 LISTED INGREDIENTS: CAS# 822-06-0 HEXAMETHYLENE DIISOCYANATE, CAS # 4098-71-9 ISOPHORONE DIISOCYANATE

CALIFORNIA PROPOSITION 65: The below list of compounds is known to the State of California to cause cancer, birth defects or other reproductive harm: NONE.



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SECTION 16: OTHER INFORMATION

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PREPARED BY: J.W. ESSIG

HAZARD RATING

HMIS: HEALTH 2 FLAMMABILITY 2 REACTIVITY 1

LEGEND

ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS

OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

STEL: SHORT TERM EXPOSURE LIMIT

TWA: TIME WEIGHTED AVERAGE

PEL: PERMISSIBLE EXPOSURE LIMIT

TLV: THRESHOLD LIMIT VALUE

NA: NOT APPLICABLE

NE: NOT ESTABLISHED

ND: NO DATA

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