

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: E4E - Urethane High Performance part A (clear)

MANUFACTURER: PPI Tech
STREET ADDRESS: 2700 W. Cumberland Street, Building 5
CITY, STATE, ZIP: Lebanon, PA 17042

INFORMATION PHONE: 717-847-7431
EMERGENCY PHONE: Chemtrec 800-424-9300

DATE REVISED: 1/28/16

Chemical Name or Class: Solvent mixture

SECTION 2: HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: Flammable liquid category 4, Skin corrosion/irritation category 2, Serious eye irritation category 2A, Specific target organ toxicity repeat exposure category 2, Acute oral toxicity category 4, Acute inhalation toxicity category 4, Acute dermal toxicity category 4, Chronic Aquatic hazard category 3, Chronic hazards to aquatic environment category 3

GHS Label Elements and Precautionary Statements:

Label Elements: Health Hazard Exclamation Mark



Hazard Statements:

Warning: Combustable liquid
Warning: Causes skin irritation
Warning: Causes serious eye irritation
Warning: May cause damage to organs through prolonged or repeated exposure
Warning: Harmful if swallowed.
Warning: Harmful if inhaled.
Warning: Harmful in contact with skin.
Harmful to aquatic life
Harmful to aquatic life with long lasting effects
Precautionary statements:
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 Wash hands thoroughly after handling.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area
P273 Avoid release to the environment.

Response:

P370 + P378 In case of fire: Use **Foam, alcohol foam, CO2, dry chemical** for extinction.
P302 + P352 IF ON SKIN: wash with plenty of soap and water.
P312 Call a POISON CENTER or doctor/physician if you feel unwell
P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.
P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 IF eye irritation persists: Get medical advice/attention.
P308 + P311 IF exposed or concerned: Call a poison center/doctor or get medical advice/attention.
P301 + P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.
P330 Rinse mouth.
P361+P364 Take off immediately all contaminated clothing and wash it before reuse
P304 + P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing
P312 Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool
P405 Store locked up.

Disposal:

P501 Dispose of contents/container to a waste disposal facility in accordance with local, state, federal or international laws

SAFETY DATA SHEET

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HMIS HAZARD CLASSIFICATION

HEALTH: 2 FLAMMIBILITY: 3 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: G

POTENTIAL HEALTH EFFECTS

EYES:

May cause serious eye irritation.

SKIN:

May cause irritation. May cause defatting, dryness, cracking, rash, redness or dermatitis.

SKIN ABSORPTION:

Not normally a route of exposure.

INGESTION:

Can cause irritation to the digestive tract including sore throat, abdominal pain, nausea, vomiting and diarrhea.

Vomiting may Cause Aspiration of solvents resulting in chemical pneumonitis.

INHALATION health risks and symptoms of exposure:

Solvent vapors are irritating to the eyes, nose and throat and respiratory tract resulting in dryness of the throat and tightness in the chest. Other symptoms include headache, nausea, narcosis, fatigue and loss of appetite.

HEALTH HAZARDS (ACUTE AND CHRONIC):

Chronic Exposure to organic solvents has been associated with various neurotoxic effects including brain damage, nervous system damage or death. Prolonged vapor contact may cause conjunctivitis. Chronic inhalation may also include loss of memory, loss of intellectual ability and loss of coordination. Repeated Exposure to solvents can cause anemia, liver abnormalities, kidney damage or cardiac abnormalities.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Respiratory conditions or other allergic response.

CARCINOGENICITY

OSHA: NO NTP: NO IARC: NO

ADDITIONAL CARCINOGENICITY INFORMATION:

No additional data known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
DIPROPYLENE GLYCOL METHYL ETHER ACETATE	88917-22-0	none	none	none	30-60
URETHANE BIS OXAZOLIDINE	59719-67-4	none	none	none	7-13
DIBUTYLIN DILURATE	77-58-7	0.1mg / m3	0.1mg / m3	0.1mg / m3	5-10
Precipitated Silica	112926-00-8	NONE	80mg/m3	NONE	7-13
PENTANEDIONE - 2,4	123-54-6	none	none	none	7-13
Additive	NJTSRN 800963-5023	none	none	none	0.1-1
Siloxanes and silicones, di-me reactions products with silica (non-hazardous)	67762-90-7	none	none	none	0.1-1
siloxanes and silicones, di-methyl (non-hazardous)	63148-62-9	none	none	none	0.1-1

SECTION 3 NOTES: *Indicates toxic chemical(s) subject to reporting requirements of section 313 of Title III and of 40 CFR 372.

Note: Ingredients listed without percentages, the percentages are considered a trade secret.

SECTION 4: FIRST AID MEASURES

EYES:

Flush eyes with water for at least fifteen minutes and consult a physician.

SKIN:

Wash affected area with soap and water and remove contaminated clothing promptly. Contact physician if irritation develops.

INGESTION:

Do not induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.

INHALATION:

Remove victim to fresh air area and administer oxygen if necessary. Consult a physician if necessary.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR,
(% BY VOLUME)

UPPER: not available
LOWER: not available

FLASH POINT: 186 degrees F

METHOD USED:

Seta Flash

EXTINGUISHING MEDIA:

Foam, alcohol foam, CO2, dry chemical

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SPECIAL FIRE FIGHTING PROCEDURES:

Do not enter confined fire area without full bunker gear including a positive pressure NIOSH approved self-contained breathing apparatus. Cool all fire exposed containers with water. Minimize contact with material.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Closed containers may explode when exposed to extreme heat. Toxic vapors could be evolved from the combustion of this material.

SECTION 6: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Remove all sources of ignition and ventilate the area. Wear appropriate protective equipment as necessary to prevent exposure. Dike and absorb the material with absorbent such as clay and place in disposal containers.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Store in cool dry area. Seal all partially used containers. Wash with soap and water before eating, drinking, smoking or using the toilet facilities. Mixed materials contain the hazards of all the components, therefore, read the MSDS's of all the components prior to using the material. Properly label all containers. Store away from all sources of ignition.

OTHER PRECAUTIONS:

Avoid all skin contact. Avoid breathing vapors generated from the material. Observe conditions of good general hygiene and safe working practices. Contaminated leather articles cannot be cleaned and must be discarded if contaminated with this product. Wash all contaminated clothing prior to the reuse thereof. Supply appropriate ventilation or engineering controls prior to using this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

Use only in a well ventilated area. If exceeding TLV's or if working in a confined space, wear suitable respiratory protection. Always consider the hazards from all components in the mixed material state.

VENTILATION :

Exhaust ventilation sufficient to keep the airborne concentrations of the solvents and other hazardous materials below the toxic level concentrations.

PROTECTIVE GLOVES:

Impervious gloves – neoprene or rubber.

EYE PROTECTION:

Splash goggles or glasses with side shields. If the environment warrants, a full face shield should be employed.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Wear body covering clothing and other coverings as necessary such as an apron and appropriate footwear to avoid contact.

WORK HYGIENIC PRACTICES:

Observe good general hygienic practices.

SEE SECTION THREE FOR OCCPATIONAL EXPOSURE LIMIT VALUES.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: medium viscosity liquid with faint solvent odor.

BOILING POINT OR RANGE: not determined

VAPOR DENSITY (AIR = 1): not available

SPECIFIC GRAVITY (H₂O = 1): 1.0-1.1

EVAPORATION RATE: not available

SOLUBILITY IN WATER: negligible

Odor Threshold: N/A

pH: N/A

Melting point/freezing point: N/A

Vapor Pressure: N/A

Auto Ignition Temperature: N/A

Partition Coefficient: n-octanol/water: N/A

Decomposition Temperature: N/A

SECTION 10: STABILITY AND REACTIVITY

STABILITY:

stable

CONDITIONS TO AVOID (STABILITY):

Avoid excessive heat or open flames. This material should not be mixed with phosphorous containing material or oxidizers.

INCOMPATIBILITY (MATERIAL TO AVOID):

Can react Vigorously with strong oxidizing agents and phosphorous containing materials.

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HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

carbon monoxide and carbon dioxide, hydrocarbon compounds as well as other hazardous compounds.

HAZARDOUS POLYMERIZATION:

Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component DIPROPYLENE GLYCOL METHYL ETHER ACETATE CAS# 88917-22-0: Toxicity to Animals LD50: Not available. LC50: Not available. Chronic Effects on Humans: The substance is toxic to lungs. Other Toxic Effects on Humans: Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant, permeator), of inhalation.

Component Dibutyltin Dilurate CAS# 77-58-7: ACUTE ORAL TOX (LD50,RAT) 3200.00 MG/KG. ACUTE DERMAL TOX (LD50,RABBIT) >2000 MG/KG (NO DEATHS). ACUTE INHAL TOX (LC50, RAT) >8.10 MG/L/1 HR. AMES TEST: NEG (ACTIVATED & NONACTIVATED) INDUST CHEMS SUC H AS THIS MATL W/ACUTE TOX VALUES SHOWN & WHOSE VAPS/MISTS ARE NOT LIKELY TO BE ENCOUNTERED BY HUMANS WHEN USED IN ANY REASONABLY FORESEEABLE MANNER WOULD NOT REQ TOXIC LBL ACCORD TO U.S. DOMESTIC & INTERNATIONAL TRANSPORT REQS. IRRIT EFTS DAT: SEV IRRITANT TO EYES OF RABBIT. MOD IRRITANT TO SKIN OF RABBIT.

Component PENTANEDIONE - 2,4 CAS# 123-54-6: LD50/LC50:

Draize test, rabbit, eye: 20 mg Severe;

Draize test, rabbit, skin: 11.2 mL/6H (Intermittent) Mild;

Draize test, rabbit, skin: 33.6 mL/6H (Intermittent) Moderate;

Draize test, rabbit, skin: 11.2 mL/2D (Intermittent) Moderate;

Oral, mouse: LD50 = 951 mg/kg;

Oral, rat: LD50 = 55 mg/kg;

Oral, rat: LD50 = 55 mg/kg;

Skin, rabbit: LD50 = 810 uL/kg;

Teratogenicity: Inhalation, rat: TClO = 398 ppm/6H (female 6-15 day(s) after conception) Effects on Embryo or Fetus - fetotoxicity (except death, e.g., stunted fetus).

Mutagenicity: Dominant Lethal Test: Inhalation, rat = 694 ppm/6h/5D.; Mutation in Mammalian Somatic Cells: Hamster, Ovary = 80 mg/L.

Component CAS# 112926-00-8: LD50 (rat >5000 mg/kg, LD50 dermal (rat) >2000 mg/kg

Component URETHANE BIS OXAZOLIDINE CAS# 59719-67-4: Mutagenicity : or critical hazards. Teratogenicity : No known significant effects or critical hazards. Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Component additive NJTSRN 800963-5023: Acute oral toxicity: LD50 rat>8,000,000 mg/kg; skin irritation rabbit – no skin irritation

SECTION 12: ECOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component DIPROPYLENE GLYCOL METHYL ETHER ACETATE CAS# 88917-22-0: Ecotoxicity: Not available.

BOD5 and COD: Not available. Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Component PENTANEDIONE - 2,4 CAS# 123-54-6: Ecotoxicity: No data available. released to soil, acetyl acetone is expected to leach readily (estimated Koc range of 6 to 28) and volatilize from dry soil surfaces. One screening study suggests that biodegradation may be the predominant fate process in water. Although this study is not specific to soil media, it suggests that biodegradation in soil may be important. If released to water, hydrolysis, aquatic oxidation, adsorption to sediment and bioconcentration in aquatic organisms are not expected to be environmentally important removal processes of acetylacetone. Environmental: Volatilization half-lives of 15 and 170 days have been estimated for a model river (one meter deep) and a model environmental pond, respectively. If released to the atmosphere, acetyl acetone is expected to exist in the vapor phase. Vapor-phase acetyl acetone is expected to degrade by reaction with photochemically produced hydroxyl radicals (estimated half-life of 14 days). Based on its high water solubility, removal from air via wet deposition may occur.

Component CAS# 112926-00-8: Ecotoxicity: EC50 (fish) .10000 mg/l (daphnia >10000 mg/l

SECTION 13: WASTE DISPOSAL

WASTE DISPOSAL METHOD:

Dispose of the material in a waste disposal site in accordance with local, state, and federal laws. Empty containers should be handled with care due to product residue and possible vapor from organic solvents. Never use a gas or electric torch to cut the drums.

SECTION 14: Transport Information

Bulk shipments DOT: NA1993, COMBUSTIBLE LIQUID N.O.S. (CONTAINS 2,4-Pentanedione, Dipropylene Glycol Methyl Ether Acetate), 3, PG III

Non-Bulk shipments DOT: Not regulated

IMO/IMDG: Not dangerous goods

SECTION 15: REGULATORY INFORMATION

No data for the product itself.

Component data:

Component DIPROPYLENE GLYCOL METHYL ETHER ACETATE CAS# 88917-22-0: Federal and State Regulations: Pennsylvania RTK: Dipropylene glycol monomethyl ether acetate Massachusetts RTK: Dipropylene glycol monomethyl ether acetate TSCA 8(b) inventory: Dipropylene glycol monomethyl ether acetate Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). Other Classifications: WHMIS (Canada): CLASS B-3: Combustible liquid. DSCL (EEC): R38- Irritating to skin. R41- Risk of serious damage to eyes. Component is on the TSCA and Canada DSL lists.

Component Dibutyltin Dilurate CAS# 77-58-7: Sara Title III Information: TOXIC SUBSTANCES CONTROL ACT (TSCA): ALL COMPONENTS ARE INCL IN EPA TOXIC SUBSTANCES CTL ACT (TSCA) CHEM SUBSTANCE INVENTORY. OSHA HAZARD COMMUNICATION STD (29CFR1910.1200) HAZARD CLASS(ES): IRRITANT.KIDNEY TOXIN. EPA SARA TITLE III SECTION 312 (40CFR370) HAZARD CLASS. IMMED HLTH HAZARD. EPA SARA TITLE III 313 (40CFR372) TOXIC CHEMICALS "DE MINIMIS" LEVEL ARE NONE. Federal Regulatory Information: CANADA DSL-INCL ON INVENTORY. HAZARD CLASSIFICATION-CLASS D DIVISION 2B..(EEC). EINECS /ELINCS MASTER INVENTORY-INCLUDED ON INVENTORY. EEC SYMBOL-HARMFUL (XN). EEC RISK (R) PHRASES-IRRITATING TO EYES & SKIN (R36/38). HARMFUL BY INHAL (R20). EEC SFTY PHRASES-IN CASE OF CONT W/EYES, RINSE IMMED W/PLENTY OF WATER & SEEK MED ADVICE (S26). AUSTRALIA-AICS-INCLUDED ON INVENTORY. State Regulatory Information: STATE REGS: PROPOSITION 65 SUBSTANCES (COMPONENT(S) KNOWN TO STATE OF CALIFORNIA TO CAUSE CANCER AND/OR REPRODUCTIVE TOXICITY & SUBJECT TO WARNING & DISCHARGE REQUIREMENTS UNDER "SAFE DRINKING WATER A ND TOXIC ENFORCEMENT ACT OF 1986"):NONE.

Component PENTANEDIONE - 2,4 CAS# 123-54-6: Component is on the New Jersey, Pennsylvania, Massachusetts right to know lists. Component is on the TSCA and Canada DSL lists.

Component CAS# 112926-00-8: Is not classified as dangerous. National Chemical Inventory listings include – AICS, DSL, IECSC, EINECS, ENCS, KECI, NZLOC, PICCS, TSCA,

Component URETHANE BIS OXAZOLIDINE CAS# 59719-67-4: Component is on the TSCA and Canada DSL lists.

Component additive NJTSRN 800963-5023: on TSCA List. Not a California Prop 65 chemical

Component Siloxanes and silicones, di-me reactions products with silica: Included on TSCA, EINECS, MITI, ACOIN, and Canadian DSL inventory or lists.

Component siloxanes and silicones, di-methyl: Included on TSCA, EINECS, MITI, ACOIN, and Canadian DSL inventory or lists.

SECTION 16: OTHER INFORMATION

DISCLAIMER: The information Contained herein is based on the data available and is believed to be accurate, However, the manufacturer makes no warranty expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Accordingly, we assume no responsibility for injury from the use of this product.

N/A = Not Available

See Section 1 for date of preparation

SAFETY DATA SHEET

E4E - Urethane High Performance part B (clear)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: E4E - Urethane High Performance part B (clear)

MANUFACTURER: PPI Tech
STREET ADDRESS: 2700 W. Cumberland Street, Building 5
CITY, STATE, ZIP: Lebanon, PA 17042

INFORMATION PHONE: 717-847-7431
EMERGENCY PHONE: Chemtrec 800-424-9300

DATE REVISED: 1/28/16

Chemical Name or Class: Solvent mixture

SECTION 2: HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: Respiratory sensitization category 1B, skin sensitizer category 1B, Serious eye irritation category 2A, Skin corrosion/irritation category 3, Acute toxicity inhalation category 4, Acute hazard to aquatic environment category 3, Chronic hazards to aquatic environment category 2

GHS Label Elements and Precautionary Statements:

Label Elements: Exclamation Mark, Health Hazard, aquatic



Hazard Statements:

Danger: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Warning: May cause an allergic skin reaction

Warning: Causes serious eye irritation

Warning: Causes mild skin irritation.

Warning: Harmful if inhaled

Harmful to aquatic life

Toxic to aquatic life with long lasting effects.

Precautionary statements:

P102 Keep out of reach of children.

P103 Read label before use

P284 Wear respiratory protection P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves and clothing to prevent skin contact.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area

P273 Avoid release to the environment.

Response

P304 + P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P342 + P311 IF experiencing respiratory symptoms: call a POISON CENTER or doctor/physician.

P302 + P352 IF ON SKIN: wash with plenty of soap and water.

P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

P362 + P364 take off contaminated clothing and wash it before reuse.

P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 IF eye irritation persists: Get medical advice/attention

P302 + P352 IF ON SKIN: wash with plenty of soap and water.

P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

P391 Collect spillage.

Disposal:

P501 Dispose of contents/container to a waste disposal facility in accordance with local, state, federal or international laws

HMIS HAZARD CLASSIFICATION

HEALTH: 2

FLAMMIBILITY: 1

REACTIVITY: 1

PERSONAL PROTECTIVE EQUIPMENT: G

POTENTIAL HEALTH EFFECTS

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EYES:

Can cause irritation, redness, tearing or blurred vision as well as corneal opacity and conjunctivitis.

SKIN:

May cause irritation, defatting, and dermatitis.

SKIN ABSORPTION:

Can cause reddening, swelling, rash, scaling or blistering. Overexposure may cause sensitization resulting in reaction to contact of small amounts.

INGESTION:

Can cause gastrointestinal irritation, nausea, vomiting, diarrhea. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal. Can cause corrosive action to mucous membranes and digestive tracts.

INHALATION health risks and symptoms of exposure:

Can cause nausea and respiratory irritation, dizziness, weakness, nausea, headache. Burning sensation to mucous membranes, shortness of breath and flu like symptoms may occur.

HEALTH HAZARDS (ACUTE AND CHRONIC):

May cause asthma or other respiratory disorders, bronchitis, emphysema, hyperactivity and eczema.

Chronic Inhalation: as a result of previous repeated overexposures or a single large dose of isocyanates, certain individuals will develop isocyanate sensitization (chemical asthma), which will cause them to react to a later exposure to isocyanate at levels well below the TLV or MGL. These symptoms, which include chest tightness, wheezing, cough, shortness of breath or asthma attack, could be immediate or delayed up to several hours after exposure. Similar to many nonspecific 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 several years. Chronic overexposure to isocyanates has been reported to cause lung damage, including decrease in lung function, which may be permanent. Sensitization may either be temporary or permanent. Acute skin Contact: Isocyanates react with the 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. Chronic Skin contact: Prolonged contact with the isocyanate 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 material or even as a result of vapor-only exposure.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Respiratory conditions or other allergic response.

CARCINOGENICITY

OSHA: NO NTP: NO IARC: NO

ADDITIONAL CARCINOGENICITY INFORMATION:

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
Hopolymer of HDI	28182-81-2	1 mg/m3	NONE	NONE	60-100
*Hexamethylene Diisocyanate (HDI)	822-06-0	NONE	.005 PPM	NONE	<0.3%

*Indicates toxic chemical (s) subject to the reporting requirements of section 313 Title III and of 40 CFR 372. All Components are on the TSCA list.

Note: Ingredients listed without percentages, the percentages are considered a trade secret.

SECTION 4: FIRST AID MEASURES

EYES:

Flush eyes with water for at least fifteen minutes and consult a physician.

SKIN:

For extreme exposure use a safety shower immediately. Wash affected area with soap and water and remove contaminated clothing promptly.

INGESTION:

Give 2-3 glasses of water to drink and induce vomiting. Keep person warm and consult a physician immediately.

INHALATION:

Remove victim to fresh air area and administer oxygen if necessary. Obtain medical assistance, asthmatic type symptoms may occur immediately or be delayed for several hours. Treatment is symptomatic.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR,
(% BY VOLUME)

UPPER: not available
LOWER: not available

FLASH POINT: 300F

METHOD USED:

Closed Cup

EXTINGUISHING MEDIA:

Foam, alcohol foam, CO2, dry chemical

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E4E - Urethane High Performance part B (clear)

SPECIAL FIRE FIGHTING PROCEDURES:

Do not enter confined fire area without full bunker gear including a positive pressure NIOSH approved self-contained breathing apparatus. Remove all sources of ignition.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Sealed drums may rupture and ignite. During a fire, HDI vapors and other toxic gasses may be evolved. Containers may burst if contaminated with water.

SECTION 6: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Wear respirator and protective clothing. Remove all sources of ignitions. Remove excess with an absorbent such as clay and place in disposal containers. Contained air respirator may be necessary.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Store in cool dry place, seal all partially used containers. Wash with soap and water before eating, drinking, smoking, or using the toilet facilities. Mixed materials contain the hazards of all the components, therefore, read the MSDS's of all the components prior to using material. Properly label all containers. Keep material away from all sources of ignition and water sources.

OTHER PRECAUTIONS:

Avoid all skin contact. Avoid breathing vapors generated from the material. Observe conditions of good general hygiene and safe working practices. Contaminated leather articles cannot be cleaned and must be discarded if contaminated with this product. Wash all contaminated clothing prior to the reuse thereof. Wear appropriate safety equipment and respirator at all times when ventilation is not sufficient to control vapors. Observe OSHA regulations for respirator use (29 CFR 1910.134). When spraying material avoid exposure to all mists generated by using air supplied respirator.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

Use a NIOSH approved respirator as required to prevent over-exposure to vapor in accordance with 29 CFR 1910.134. Engineering or administrative measures should be taken to reduce the risk and exposure. Use a positive pressure supplied air respirator when exceeding TLV's or if HDI Monomer concentrations exceed acceptable limits or when spraying material.

VENTILATION :

Exhaust ventilation sufficient to keep airborne concentrations of HDI below their TLV and MGL maximum. Refer to Patty's Industrial Hygiene and Toxicology- Volume 1 (3rd edition) Chapter 17 and Volume III (1st edition) Chapter 3 for details.

PROTECTIVE GLOVES:

Impervious gloves – neoprene or rubber.

EYE PROTECTION:

Splash goggles or glasses with side shields. Do not wear contact lenses when using this product.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Wear body covering clothing and other coverings as necessary such as an apron and appropriate footwear to avoid contact.

WORK HYGIENIC PRACTICES:

Observe good general hygienic practices.

SEE SECTION THREE FOR OCCPATIONAL EXPOSURE LIMIT VALUES.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Pale yellow liquids, odorless

BOILING POINT OR RANGE: not determined

VAPOR DENSITY (AIR = 1): not available

SPECIFIC GRAVITY (H₂O = 1): 1.12

EVAPORATION RATE: not available

SOLUBILITY IN WATER: reacts with water

Odor Threshold: N/A

pH: N/A

Melting point/freezing point: N/A

Vapor Pressure: N/A

Auto Ignition Temperature: N/A

Partition Coefficient: n-octanol/water: N/A

Decomposition Temperature: N/A

SECTION 10: STABILITY AND REACTIVITY

STABILITY:

stable

CONDITIONS TO AVOID (STABILITY):

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Avoid excessive heat or open flames as well as all sources of ignition such as sparks, heaters, static discharges, etc.

INCOMPATIBILITY (MATERIAL TO AVOID):

Avoid water, amines, strong bases, alcohols, metal compounds, and surface active compounds.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

May form toxic chemicals, carbon dioxide carbon monoxide, oxides of nitrogen, HCN and HDI.

HAZARDOUS POLYMERIZATION:

Moisture or materials that react with isocyanates and temperatures above 400 degrees F may cause polymerization.

SECTION 11: TOXICOLOGICAL INFORMATION

COMPONENT Homopolymer of HDI: Acute Oral Toxicity LD50 >5000 mg/kg (rat). Acute Inhalation Toxicity LC50 390-453 mg/m3, aerosol, 4 hrs (rat). Acute Dermal Toxicity LD50 >5000 mg/kg (rabbit). Eye and skin irritation: Slightly irritating (rabbit, Draize). Sensitization: dermal: Sensitizer (guinea pig, Maximization test (GPMT); Dermal: non-sensitizer (guinea pig, Buehler), Inhalation: non-sensitizer (guinea pig). Repeated Dose Toxicity: 3 wks, inhalation: NOAEL: 3.7-4.3 mg/m3 (rat), 90 ds, inhalation: NOAEL: 3.3 – 3.4 mg/m3 (rat), irritation to lungs and nasal cavity. Mutagenicity: Genetic Toxicity in Vitro- Ames: negative (salmonella typhimurium. Metabolic Activation, with/without).

SECTION 12: ECOLOGICAL INFORMATION

COMPONENT Homopolymer of HDI: Biodegradation: 0%, Exposure time: 28 days, not readily biodegradable. Acute and Prolonged Toxicity to fish LC0 > 100 mg/l (zebra fish, 96 h). Acute toxicity to aquatic invertebrates: EC0 > 100 mg/l (water flea, 48 h. Toxicity to aquatic plants EC50 > 1000 mg/l (green algae, 72 h. Toxicity to Microorganisms: EC50 > 1000 mg/l (activated sludge microorganisms, 3 h).

SECTION 13: WASTE DISPOSAL

WASTE DISPOSAL METHOD:

Dispose of the material in a waste disposal site in accordance with local, state, and federal laws.

SECTION 14: Transport Information

DOT: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (CONTAINS HEXAMETHYLENE DIISOCYANATE) , 9, PGIII,

IMO/IMDG: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (CONTAINS HEXAMETHYLENE DIISOCYANATE) , 9, PGIII, MARINE POLLUTANT

SECTION 15: REGULATORY INFORMATION

COMPONENT Homopolymer of HDI: OSHA hazard rating – Hazardous. Listed on the TSCA and Canada DSL lists. Component is on the Massachusetts, New Jersey, and Pennsylvania Right to Know Lists.

COMPONENT Hexamethylene Diisocyanate: OSHA hazard rating – Hazardous. Listed on the TSCA and Canada DSL lists. Component is on the Massachusetts, New Jersey, and Pennsylvania Right to Know Lists.

SECTION 16: OTHER INFORMATION

DISCLAIMER: The information Contained herein is based on the data available and is believed to be accurate, However, the manufacturer makes no warranty expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Accordingly, we assume no responsibility for injury from the use of this product.

N/A = Not Available

See Section 1 for date of preparation

SAFETY DATA SHEET

E4E - Urethane High Performance part C (Aggregate)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: E4E - Urethane High Performance part C (Aggregate)

MANUFACTURER: PPI Tech
STREET ADDRESS: 2700 W. Cumberland Street, Building 5
CITY, STATE, ZIP: Lebanon, PA 17042

INFORMATION PHONE: 717-847-7431
EMERGENCY PHONE: Chemtrec 800-424-9300

DATE REVISED: 1/28/16

Chemical Name or Class: Solvent mixture

SECTION 2: HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: Not classified as dangerous according to the regulations

GHS Label Elements and Precautionary Statements:

Label Elements: None

Hazard Statements:

P102 Keep out of reach of children.

P103 Read label before use

Precautionary statements:

None

Other Non-Classifiable hazards information

Hazard Statements:

P261: Avoid breathing dust/fume/gas/mist/vapors/spray

P280: Wear Eye Protection/face protection

P285: In case of inadequate ventilation, use respiratory protection.

Precautionary statements:

P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lense, if present and easy to do. Continue rinsing.

P302+P352: If on skin, wash with plenty of soap and water.

HMIS HAZARD CLASSIFICATION

HEALTH: 1 **FLAMMIBILITY:** 0 **REACTIVITY:** 0 **PERSONAL PROTECTIVE EQUIPMENT:** E

POTENTIAL HEALTH EFFECTS

EYES:

MAY CAUSE REDDENING OF THE EYES OR EYE IRRITATION FROM AIRBORNE PARTICLES

SKIN:

NONE KNOWN

INGESTION:

NONE KNOWN

INHALATION:

NO DATA AVAILABLE

HEALTH HAZARDS (ACUTE AND CHRONIC):

INHALATION OF DUST GENERATED MAY AGGREGATE PRE-EXISTING CONDITIONS

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

PULMONARY CONDITIONS OR OTHER SIMILAR AILMENTS CAN BE AGGRAVATED BY EXPOSURE.

CARCINOGENICITY

OSHA: NO NTP: NO IARC: NO

NO CARCINOGENICITY PROPERTIES ARE KNOWN TO EXIST.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
Fused white aluminium oxide	1344-28-1	5MG/M3	10MG/M3	NONE	100

SECTION 3 NOTES: *No toxic chemical(s) subject to reporting requirements of section 313 of Title III and of 40 CFR 372. All components are on the TSCA list.

SAFETY DATA SHEET

E4E - Urethane High Performance part C (Aggregate)

SECTION 4: FIRST AID MEASURES

EYES:

FLUSH EYES WITH WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN IF CONDITION WARRANTS.

SKIN:

SKIN CONTACT WILL NORMALLY CAUSE NO HEALTH RISKS.

INGESTION:

IF INGESTED, CONSULT A PHYSICIAN.

INHALATION:

REMOVE VICTIM TO FRESH AIR AND ADMINISTER OXYGEN IF NECESSARY, CONSULT WITH A PHYSICIAN IF CONDITIONS WARRANT.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR,
(% by volume)

UPPER: N/A
LOWER: N/A

FLASH POINT: N/A

METHOD USED:

N/A

EXTINGUISHING MEDIA:

NONE KNOWN

SPECIAL FIRE FIGHTING PROCEDURES:

ALUMINUM OXIDE IS NEITHER A FIRE NOR AN EXPLOSION HAZARD.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NO UNUSUAL FIRE HAZARDS KNOWN

SECTION 6: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

WEAR RESPIRATOR AND USE DUSTLESS HANDLING EQUIPMENT TO CLEAN UP LARGE SPILLS. PLACE IN SUITABLE CONTAINERS FOR DISPOSAL. FLUSH AREA WITH WATER AFTER PICKUP OF MATERIAL.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

STORE IN A COOL DRY PLACE. PROPERLY LABEL ALL CONTAINERS AND RESEAL ALL PARTIALLY USED CONTAINERS. AVOID CREATING ANY DUST WHEN WORKING WITH THIS MATERIAL.

OTHER PRECAUTIONS:

AVOID BREATHING DUST GENERATED FROM THIS MATERIAL. OBSERVE CONDITIONS OF GOOD GENERAL HYGIENE AND SAFE WORKING PRACTICES.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

USE A NIOSH APPROVED RESPIRATOR OR DUST MASK AS REQUIRED TO PREVENT OVER-EXPOSURE TO DUST. PROVIDE SUFFICIENT EXHAUST TO KEEP EXPOSURE LEVELS BELOW THE ACGIH PEL.

VENTILATION:

USE EXHAUST SUFFICIENT TO MAINTAIN AIRBORNE PARTICULATES BELOW THE ACGIH PEL LIMITS ESTABLISHED.

PROTECTIVE GLOVES:

N/A

EYE PROTECTION:

SPLASH PROOF GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

PROVIDE ANY EQUIPMENT NECESSARY TO PREVENT THE INHALATION OF DUST.

WORK HYGIENIC PRACTICES:

OBSERVE GOOD GENERAL HYGIENIC PRACTICES.

SEE SECTION THREE FOR OCCUPATIONAL EXPOSURE LIMIT VALUES.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: WHITE POWDER FORM

BOILING POINT OR RANGE: N/A

SAFETY DATA SHEET

E4E - Urethane High Performance part C (Aggregate)

VAPOR DENSITY (AIR = 1): N/C
SPECIFIC GRAVITY (H2O = 1): 1.5
EVAPORATION RATE: N/A
SOLUBILITY IN WATER: N/A

Odor Threshold: N/A
pH: N/A
Melting point/freezing point: N/A
Vapor Pressure: N/A
Auto Ignition Temperature: N/A
Partition Coefficient: n-octanol/water: N/A
Decomposition Temperature: N/A

SECTION 10: STABILITY AND REACTIVITY

STABILITY:
STABLE
CONDITIONS TO AVOID (STABILITY):
NONE KNOWN
INCOMPATIBILITY (MATERIAL TO AVOID):
NONE KNOWN
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:
NONE KNOWN
HAZARDOUS POLYMERIZATION:
WILL NOT OCCUR

SECTION 11: TOXICOLOGICAL INFORMATION

Component Fused white aluminium oxide CAS# 1334-28-1: Special Remarks on Chronic Effects on Humans: May cause cancer (tumorigenic) according to animal data. No human data found. Special Remarks on other Toxic Effects on Humans: Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: Nuisance Dust. Dust may cause mechanical eye irritation. Inhalation: Nuisance Dust. Material is irritating to mucous membranes and upper respiratory tract. May cause lung injury. Ingestion: May be harmful if swallowed. Ingestion of large amounts may cause gastrointestinal tract irritation. It is expected to be a low hazard for normal industrial handling.

SECTION 12: ECOLOGICAL INFORMATION

Component Fused white aluminium oxide CAS# 1334-28-1: Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

SECTION 13: WASTE DISPOSAL

WASTE DISPOSAL METHOD:
DISPOSE OF THE MATERIAL IN A WASTE DISPOSAL SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS.

SECTION 14: Transport Information

DOT: NOT REGULATED

IMO/IMDG: NOT REGULATED

SECTION 15: REGULATORY INFORMATION

Component Fused white aluminium oxide CAS# 1334-28-1: Federal and State Regulations: Illinois toxic substances disclosure to employee act: Aluminum oxide Rhode Island RTK hazardous substances: Aluminum oxide Minnesota: Aluminum oxide Massachusetts RTK: Aluminum oxide New Jersey: Aluminum oxide New Jersey spill list: Aluminum oxide California Director's list of Hazardous Substances: Aluminum oxide TSCA 8(b) inventory: Aluminum oxide SARA 313 toxic chemical notification and release reporting: Aluminum oxide Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances. Other Classifications: WHMIS (Canada): Not controlled under WHMIS (Canada). DSCL (EEC): R36/38- Irritating to eyes and skin. S2- Keep out of the reach of children. S46- If swallowed, seek medical advice immediately

SECTION 16: OTHER INFORMATION

DISCLAIMER:

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE AND IS BELIEVED TO BE ACCURATE, HOWEVER, THE MANUFACTURER MAKES NO WARRANTY EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE

SAFETY DATA SHEET

E4E - Urethane High Performance part C (Aggregate)

RESULTS OBTAINED FROM THE USE THEREOF. ACCORDINGLY, WE ASSUME NO RESPONSIBILITY FOR INJURY FROM THE USE OF THIS PRODUCT.

N/A = Not Available

See Section 1 for date of preparation

SAFETY DATA SHEET

E4E - Pigment Packs

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: E4E Pigment Packs

MANUFACTURER: PPI Tech
STREET ADDRESS: 2700 W. Cumberland Street,
Building 5
CITY, STATE, ZIP: Lebanon, PA 17042

INFORMATION PHONE: 717-847-4131
EMERGENCY PHONE: Chemtrec 800-424-9300

DATE REVISED: 6/1/15

Chemical Name or Class: pigments

SECTION 2: HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: Not classified as dangerous according to the regulations

GHS Label Elements and Precautionary Statements:

Label Elements: None

Hazard Statements:

P102 Keep out of reach of children.

P103 Read label before use

Precautionary statements:

None

Other Non-Classifiable hazards information

Hazard Statements:

P261: Avoid breathing dust/fume/gas/mist/vapors/spray

P280: Wear Eye Protection/face protection

P285: In case of inadequate ventilation, use respiratory protection.

Precautionary statements:

P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lense, if present and easy to do. Continue rinsing.

P302+P352: If on skin, wash with plenty of soap and water.

Other Non-classifiable potential hazards

Carcinogen category 2

HMIS HAZARD CLASSIFICATION

HEALTH: 1 **FLAMMIBILITY:** 1 **REACTIVITY:** 0 **PERSONAL PROTECTIVE EQUIPMENT:** G

POTENTIAL HEALTH EFFECTS

EYES:

MAY CAUSE IRRITATION AND POSSIBLE CORNEAL DAMAGE.

SKIN:

MAY CAUSE IRRITATION OR ALLERGIC SKIN RESPONSE.

INGESTION:

CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, OR VOMITING. ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

INHALATION:

NO GUIDE FOR CONTROL KNOWN, HOWEVER, EXPOSURE TO HEATED VAPORS CAN CAUSE IRRITATION TO THE NOSE, THROAT OR MUCOUS MEMBRANES.

HEALTH HAZARDS (ACUTE AND CHRONIC):

CAN CAUSE IRRITATION OR ALLERGIC SKIN RESPONSE. NO OTHER HAZARDS KNOWN.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

RESPIRATORY CONDITIONS OR OTHER ALLERGIC RESPONSE.

CARCINOGENICITY

OSHA: NO NTP: NO IARC: yes

ADDITIONAL CARCINOGENICITY INFORMATION:

Some colors may contain carbon black - Explanation Of Carcinogenicity: IARC MONOGRAPHS ON EVALUATION

SAFETY DATA SHEET

E4E - Pigment Packs

OF CARCINOGENIC RISK OF CHEMICALS TO MAN, VOL 65, PG 149, 1996: GROUP 2B. Titanium Dioxide is listed by IARC as possibly carcinogenic to humans (group 2B).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
2-(3-heptyl)-N-butyl-1,3-oxazolidine	165101-57-5	none	none	none	1-5
aluminum hydroxide	21645-51-2	none	10mg/m3	none	1-5
proprietary additive	NJTSRN 567057-00001-5382P	none	none	none	1-5
non hazardous component	NJTSRN 56705700001-5027P	none	none	none	15-40

Depending on color may also contain the following pigments or products @ 40-70%

Titanium dioxide	13463-67-7	10mg/m3	10mg/m3	5mg/m3	
Additive	NJTSRN 678290-00-2-50028-P	none	none	none	
yellow iron oxide	51274-00-1	5mg/m3	10mg/m3	none	
iron oxide	1332-37-2	5mg/m3	10mg/m3	none	
copper phthalocyanine	147-14-8	none	none	none	
C.I. Pigment Violet 19	1047-16-1	none	none	none	
carbon	1333-86-4	3.5PPM	3.4PPM	NONE	
C.I. pigment green 7	1328-53-6	none	none	none	

SECTION 3 NOTES:

No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present.

Note: Ingredients listed without percentages, the percentages are considered a trade secret.

SECTION 4: FIRST AID MEASURES

EYES:

FLUSH EYES WITH WATER FOR AT LEAST FIFTEEN MINUTES AND CONSULT A PHYSICIAN.

SKIN:

SKIN CONTACT WILL NORMALLY CAUSE NO MORE THAN IRRITATION BUT WASH AFFECTED AREA WITH SOAP AND WATER AND REMOVE CONTAMINATED CLOTHING PROMPTLY.

INGESTION:

DO NOT INDUCE VOMITING AND CONSULT A PHYSICIAN.

INHALATION:

REMOVE VICTIM TO FRESH AIR AREA AND ADMINISTER OXYGEN IF NECESSARY. CONSULT PHYSICIAN IF NECESSARY.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: N/A
(% by volume) LOWER: N/A

FLASH POINT: >200F

METHOD USED:

SETA FLASH

EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES:

DO NOT ENTER CONFINED FIRE AREA WITHOUT FULL BUNKER GEAR INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS, COOL ALL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NO UNUSUAL FIRE HAZARDS KNOWN.

SECTION 6: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

WEAR RESPIRATOR AND PROTECTIVE CLOTHING. SHUT OFF THE SOURCE AT THE LEAK. REMOVE EXCESS WITH VACUUM TRUCK AND TAKE UP THE REMAINDER WITH AN ABSORBANT SUCH AS CLAY AND PLACE IN DISPOSAL CONTAINERS. FLUSH AREA WITH WATER TO REMOVE RESIDUE.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

STORE IN COOL DRY PLACE. SEAL ALL PARTIALLY USED CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS, THEREFOR, READ THE MSDS'S OF ALL THE COMPONENTS PRIOR TO USING MATERIAL. PROPERLY LABEL ALL CONTAINERS.

OTHER PRECAUTIONS:

SAFETY DATA SHEET

E4E - Pigment Packs

AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS GENERATED FROM THE MATERIAL. OBSERVE CONDITIONS OF GOOD GENERAL HYGIENE AND SAFE WORKING PRACTICES. CONTAMINATED LEATHER ARTICLES CANNOT BE CLEANED AND MUST BE DISCARDED IF CONTAMINATED WITH THIS PRODUCT. WASH ALL CONTAMINATED CLOTHING PRIOR TO THE REUSE THEREOF.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

USE A NIOSH APPROVED RESPIRATOR AS REQUIRED TO PREVENT OVER-EXPOSURE TO VAPOR IN ACCORDANCE WITH 29 CFR 1910.134.

VENTILATION :

GENERAL EXHAUST IS USUALLY SUFFICIENT TO CONTROL VAPORS AND EXPOSURE HAZARDS. HOWEVER, IF VENTILATION IS NOT SUFFICIENT TO CONTROL VAPORS, A NIOSH APPROVED RESPIRATOR MUST BE USED.

PROTECTIVE GLOVES:

IMPERVIOUS GLOVES – NEOPRENE OR RUBBER

EYE PROTECTION:

SPLASH GOGGLES OR GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

WEAR BODY COVERING CLOTHING AND OTHER COVERING AS NECESSARY SUCH AS APRON AND APPROPRIATE FOOTWEAR TO AVOID CONTACT WITH MATERIAL.

WORK HYGIENIC PRACTICES:

OBSERVE GOOD GENERAL HYGIENIC PRACTICES.

SEE SECTION THREE FOR OCCPATONAL EXPOSURE LIMIT VALUES.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: medium viscosity liquid in various colors

BOILING POINT OR RANGE: not determined

VAPOR DENSITY (AIR = 1) ° F: N/A

SPECIFIC GRAVITY (H2O = 1): varies by color

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: NEGLIGIBLE

Odor Threshold: N/A

pH: N/A

Melting point/freezing point: N/A

Vapor Pressure: N/A

Auto Ignition Temperature: N/A

Partition Coefficient: n-octanol/water: N/A

Decomposition Temperature: N/A

SECTION 10: STABILITY AND REACTIVITY

STABILITY:

STABLE

CONDITIONS TO AVOID (STABILITY):

AVOID EXCESSIVE HEAT OR OPEN FLAMES.

INCOMPATIBILITY (MATERIAL TO AVOID):

CAN REACT VIGOROUSLY WITH STRONG OXIDIZING AGENTS AND STRONG LEWIS ACIDS OR MINERAL ACIDS. CAN REACT MILDLY WITH WATER.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

CO₂, ALDEHYDES, ACIDS, CARBON COMPOUNDS, HYDROGEN COMPOUNDS ETC.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

SECTION 11: TOXICOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component 2-(3-heptyl)-N-butyl-1,3-oxazolidine CAS# 165101-57-5: LD50 >2000 mg/kg (rat)

Component Titanium Dioxide: Inhalation 4 h LC50 > 6.82 mg/l; Oral LD50 > 5000 mg/kg, rat; In February 2006, IARC listed titanium dioxide as possibly carcinogenic to humans Group 2B.

Component Carbon: IARC lists carbon as a possible human carcinogen Category 2B. LD50 – Intravenous, mouse = 440 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

No data for the product itself.

SAFETY DATA SHEET

E4E - Pigment Packs

Component data:

Component 2-(3-heptyl)-N-butyl-1,3-oxazolidine CAS# 165101-57-5: Significant Biodegradation; approximately 66% over 28 days. Fish LC50, 96 hr = 20 mg/l. Daphnia EC50, 48 hrs = 3.26mg/l. Algae growth inhibition EOC50 – 5.6 mg/l

Component Titanium Dioxide: Pimephales promelas (fathead minnow) < 1000 mg/l @ 96h LC50; Pseudokirchneriella subcapitata (green algae) 61 mg/l @ 72h EC50; Daphnia magna (water flea) > 1000 mg/l @ 48h EC50

SECTION 13: WASTE DISPOSAL

WASTE DISPOSAL METHOD: DISPOSE OF THE MATERIAL IN A WASTE DISPOSAL SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS.

SECTION 14: Transport Information

DOT: NOT REGULATED

IMO/MDG: NOT REGULATED

SECTION 15: REGULATORY INFORMATION

No data for the product itself.

Component data:

Component 2-(3-heptyl)-N-butyl-1,3-oxazolidine CAS# 165101-57-5: Component is on the TSCA list. DSL/NDSL (Canadian Domestic Substance List / Non-Domestic Substance List) Registered. EINECS (European Inventory of Existing Chemical Substances) Level VII B.

Component Titanium Dioxide: Contains Proposition 65 Chemicals, is on the PA Hazardous substance list, is on the NJ right to know Regulated chemical List. Titanium Dioxide is on inventory or in compliance with EINECS, TSCA, AICS, DSL, ENCS (JP), KECI (KR), PICCS (PH) and INV (CN).

Component Carbon: Contains Proposition 65 Chemicals .Carbon: is listed on TSCA and DSL Canada

Component proprietary additive NJTSRN 567057-00001-5382P: Component is on the TSCA, EINECS, Canada DSL, TCCL lists.

Component Additive NJTSRN 56705700001-5027P: Component is on the TSCA, EINECS, Canada DSL, TCCL lists.

aluminum hydroxide CAS# 21645-51-2: Component is on the TSCA, EINECS, Canada DSL, TCCL lists.

Component Additive NJTSRN 678290-00-2-50028-P: Component is on the TSCA, EINECS, Canada DSL lists.

Component iron oxide CAS# 1332-37-2: Component is on the TSCA, EINECS, Canada DSL, New Zealand, TCCL lists.

Component yellow iron oxide CAS# 51274-00-1: Component is on the TSCA, EINECS, Canada DSL, New Zealand, AICS, MITI, China, TCCL lists.

Component copper phthalocyanine CAS# 147-14-8: Component is on the TSCA, Canada DSL lists.

Component C.I. Pigment Violet 19 CAS# 1047-16-1: Component is on the TSCA, Canada DSL lists.

Component C.I. pigment green 7 CAS# 1328-53-6: Component is on the TSCA, Canada DSL lists.

SECTION 16: OTHER INFORMATION

DISCLAIMER: THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE AND IS BELIEVED TO BE ACCURATE, HOWEVER, THE MANUFACTURER MAKES NO WARRANTY EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS OBTAINED FROM THE USE THEREOF. ACCORDINGLY, WE ASSUME NO RESPONSIBILITY FOR INJURY FROM THE USE OF THIS PRODUCT.

N/A = Not Available

See Section 1 for date of preparation