SAFETY DATA SHEET

PRODUCT CODE: 341LV

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **ARM341LV PART A**
PRODUCT CODES: **341LV A**

MANUFACTURER: **Armorpoxy Inc**
STREET ADDRESS: **1260 North Avenue**
CITY, STATE, ZIP: **Plainfield, NJ 07062**

INFORMATION PHONE: **888-755-7361**
EMERGENCY PHONE: **Chemtrec 800-424-9300**
FAX PHONE: **(973) 453-8114**

PREPARED BY: **Armorpoxy Inc**

DATE REVISED: **11/30/15**

Chemical Name or Class: Aliphatic amine/solvent mixture

SECTION 2: HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: **Flammable Liquids category 3, Skin sensitizer category 1B, Acute toxicity (inhalation) category 4, skin irritation category 2, Eye irritation category 2A, Germ cell mutagenicity category 1B, carcinogenicity category 2, Specific target organ toxicity – single exposure category 3, Specific target organ toxicity – repeated exposure category 2, Chronic hazards to aquatic environment category 3**

GHS Label Elements and Precautionary Statements:
Label Elements: Flame, Health hazard, Exclamation Mark

Hazard Statements:
Warning: Flammable liquid and vapor.
Warning: May Cause an allergic skin reaction.
Warning: Harmful if inhaled.
Warning: Causes skin irritation
Warning: Causes serious eye irritation.
Warning: Suspected of causing genetic defects.
Warning: Suspected of causing cancer.
Warning: May cause Respiratory irritation or may cause drowsiness or dizziness.
Warning: May cause damage to organs (liver, kidney, nervous system, respiratory system, liver, central nervous system) through prolonged or repeated exposure
Harmful to aquatic life with long lasting effects..
Precautionary statements:
P102 Keep out of reach of children.
P103 Read label before use
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/…/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P272 Contaminated work clothing should not be allowed out of the workplace.
P271 Use only outdoors or in a well-ventilated area
P264 Wash hands thoroughly after handling.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
Response
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/showerP370 + P378 In case of fire: Use FOAM, ALCOHOL FOAM, CO2, WATER FOG for extinction.
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.
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.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
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.
P314 Get medical advice/attention if you feel unwell
Storage:
P403 + P235 Store in a well-ventilated place. Keep cool
P233 Keep container tightly closed.
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: 2 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: G

POTENTIAL HEALTH EFFECTS
EYES:
HIGH VAPOR CONCENTRATIONS CAN CAUSE SEVERE IRRITATION TO THE EYES, NOSE OR THROAT.
SKIN:
CAN CAUSE SEVERE IRRITATION TO THE SKIN.
INGESTION:
LIQUID CAN CAUSE DAMAGE TO MUCOUS MEMBRANES IF SWALLOWED.
INHALATION:
HIGH CONCENTRATIONS OF VAPOR CAN CAUSE IRRITATION TO THE RESPIRATORY TRACT, NAUSEA AND DIZZINESS.
HEALTH HAZARDS (ACUTE AND CHRONIC):
PROLONGED OR REPEATED EXPOSURE MAY CAUSE ASTHMA AND SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSES. CAN CAUSE SENTIZATION BY EXPOSURE THROUGH CONTACT OR HIGH CONCENTRATION OF VAPOR. OVER EXPOSURE TO THIS MATERIAL CAN CAUSE CARDIAC ABNORMALITIES, ANEMIA, LIVER ABNORMALITIES, KIDNEY DAMAGE OR EVEN EYE DAMAGE. CAN CAUSE ASTHMA OR OTHER RESPIRATORY DISORDERS, BRONCHITIS, EMPHYSEMA, HYPERACTIVITY, AND EXCEMA.
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
RESPIRATORY CONDITIONS OR OTHER ALLERGIC AILMENTS
CARCINOGENICITY
OSHA: NO NTP: NO IARC: yes
ADDITIONAL CARCINOGENICITY INFORMATION:
Product may contain ethyl benzene as a component of Aromatic Petroleum Distillates (IARC 2B)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO.	OSHA PEL	ACGIH TLV	OSHA STEL	WEIGHT %
CYCLOALIPHATIC DIAMINE	136210-30-5	NE	NE	NE	60-100
ALIPHATIC CARBOXYLIC ESTER	623-91-6	N/E	NE	NE	1-5
AROMATIC PETROLEUM DISTILLATES	64742-95-6	100ppm	100ppm	NONE	10-30
*cumene (as a component of 64742-95-6)	98-82-8	50ppm	50ppm	NONE	(<1%)
*1,2,4-Trimethylbenzene (as a component of 64742-95-6)	95-63-6	25ppm	NONE	NONE	(<10%)
*ethyl benzene (as a component of 64742-95-6	0) 100-41-4	100ppm	100ppm	125ppm	(<0.1)
*Xylene (as a component of CAS# 64742-95-6)	1330-20-7	100PPM	100PPM	150PPM	(<1%)

*****Indicates 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:
IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE LIFTING UPPER AND LOWER LIDS, GET IMMEDIATE MEDICAL ASSISTANCE.
SKIN:
FLUSH SKIN WITH WATER FOR AT LEAST 15 MINUTES AND REMOVE ALL CONTAMINATED CLOTHING IMMEDIATELY. GET MEDICAL ATTENTION IF REDDENING OR SWELLING OCCURS.
INGESTION:
DO NOT INDUCE VOMITING. DILUTE BY GIVING WATER OR MILK TO DRINK IF VICTIM IS CONSCIOUS. GET MEDICAL ATTENTION IMMEDIATELY.
INHALATION:
REMOVE TO FRESH AIR IF EFFECTS PERSIST AND ADMINISTER OXYGEN IF NECESSARY.
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: 100-140F

METHOD USED:
SETA FLASH
EXTINGUISHING MEDIA:
FOAM, ALCOHOL FOAM, CO2, WATER FOG
SPECIAL FIRE FIGHTING PROCEDURES:
TOXIC FUMES WILL BE EVOLVED WHEN THIS MATERIAL IS INVOLVED IN A FIRE. A SELF-CONTAINED BREATHING APPARATUS SHOULD BE AVAILABLE FOR FIRE FIGHTERS. COOL FIRE EXPOSED CONTAINERS WITH WATER.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
NONE KNOWN

SECTION 6: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: AVOID CONTACT WITH MATERIAL. WEAR THE APPROPRIATE SAFETY EQUIPMENT. STOP SPILL AT SOURCE, DYKE AREA TO PREVENT SPREADING. PUMP LIQUID TO SALVAGE TANK. TAKE UP REMAINDER WITH CLAY OR OTHER ABSORBANT AND PLACE IN DISPOSAL CONTAINERS.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS. RESEAL PARTIALLY USED CONTAINERS. PROPERLY LABEL ALL CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. OBSERVE CONDITIONS OF GOOD INDUSTRIAL HYGIENE AND SAFE WORKING PRACTICES.
OTHER PRECAUTIONS:
MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS, THEREFORE, READ THE MSDS OF ALL COMPONENTS TO BECOME FAMILIAR WITH ALL HAZARDS PRIOR TO USING THIS PRODUCT.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:
NIOSH APPROVED RESPIRATOR PROTECTION REQUIRED IN THE ABSENCE OF PROPER ENVIRONMENTAL CONTROLS. FOR EMERGENCIES A SELF-CONTAINED BREATHING APPARATUS OR A FULL FACE RESPIRATOR IS RECOMMENDED.
VENTILATION:
AVOID BREATHING VAPORS. VENTILATION MUST BE SUFFICIENT TO CONTROL VAPORS.
PROTECTIVE GLOVES:
IMPERVIOUS GLOVES, NEOPRENE OR RUBBER.
EYE PROTECTION:
SPLASH PROOF GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
CLEAN BODY COVERING CLOTHING AS WELL AS APRON FOOTWEAR OR OTHER EQUIPMENT SHOULD BE USED AS DEEMED NECESSARY TO AVOID CONTACT WITH THE MATERIAL.
WORK HYGIENIC PRACTICES:
OBSERVE GENERAL GOOD HYGIENIC PRACTICES.

SEE SECTION THREE FOR OCCPATIONAL EXPOSURE LIMIT VALUES.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: CLEAR LIQUID WITH SLIGHT AROMATIC SOLVENT ODOR
BOILING POINT OR RANGE: N/A
VAPOR DENSITY (AIR = 1): Not available
SPECIFIC GRAVITY (H2O = 1): 1.0
EVAPORATION RATE: N/A
SOLUBILITY IN WATER: NEGLIGIBLE

Odor Threshhold: 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 CONTACT WITH OPEN FLAMES AND ALL SOURCES OF IGNITIONS AND SPARKS.
INCOMPATIBILITY (MATERIAL TO AVOID):
AVOID CONTACT WITH STRONG OXIDIZING AGENTS OR MATERIALS
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

CO, CO2, NOX, AMINES AND OTHER ALIPHATIC FRAGMENTS WHICH HAVE NOT BEEN DETERMINED.
HAZARDOUS POLYMERIZATION:
WILL NOT OCCUR

SECTION 11: TOXICOLOGICAL INFORMATION

No data for the product itself.
Component data:
Component CAS# 64742-95-6 Test on similar materials show a low order of acute oral and dermal toxicity. May cause eye irritation, may cause irritation on skin and mucous membranes.
Component Ethyl Benzene (a minor component of CAS# 64742-96-6): Acute Oral toxicity LD50: ca. 3500 mg/kg (rat); Acute inhalation LC50: 17.2 mg/l 4h (rat); Acute Dermal Toxicity: 17,800 mg/kg (rabbit); Skin Irritation rabbit Draize exposure time 24h – slightly irritating. Eye Irritation rabbit Draize – severely irritating. Sensitization dermal (human patch test) non-sensitizer.Repeated Dose toxicity 28 days inhalation NOAEL: 3.4 mg/l (rabbit). Mutagenicity Genetic Toxicity in Vitro: Ames: Negative (salmonella typhimurium, metabolic activation with/without). Carcinogenecity: Ethyl benzene was tested by inhalation exposure in mice and rats. Ibn mice, there was an increased incidence of lung adenomas in males and liver adenomas in females. In male rats, there was an increased incidence of renal tubule adenomas and carcinomas. Two Studies of workers potentially exposed to ethyl benzene in a production plant and a styrene polymerization plant, showed no excess cancer incidence and no excess cancer mortalitry during a 15 year follow-up. Toxicity to Reproduction/Fertility: Inhalation (monkey, male) Reproductive effects have been observed in animal studies, In a generation study, inhalation (rat/female) NOAEL (parental): 100ppm NOAEL (F2): 100ppm. Developmental Toxicity/Teratogenicity rat, female, inhalation, gestation, daily, NOAEL (teratogenicity): 100ppm (maternal): 100ppm. Tratogenetic effects seen only with maternal toxicity., Fetotoxicity seen only with maternal toxicity. Rabbit, female, inhalation, gestation, daily, NOAEL (teratogenicity) < 1000 mg/m3, NOAEL (maternal) < 1000 mg/m3.
Component Xylene (a minor component of CAS# 64742-95-6): Inhalation LC50 26800ppm, Skin LD50 2000 mg/kg, Ingestion LD50 4.3 g/kg. Exposure may effect skin, eye, liver, kidney, nervous system, respiratory system and lungs. High concentrations may lead to nervous system effects. Repeated overexposure has produced toxic effects in developing and young laboratory animals. Aspiration into lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.
Component Cumene(a minor componebt of CAS# 64742-95-6): IARC has classified Cumene as possibly Carcinogenic to humans (group 2B).
Component CAS# 95-63-6: Oral LD50 (rat) = 5000 mg/kg. Inhalation LC50 (rat) -4h = 18000 mg/m3.
Components CYCLOALIPHATIC DIAMINE CAS# 136210-30-5: (toxicity note: Toxicity data based on a similar product) Acute Oral Toxicity >2000 mg/kg (rat). Acute Inhalation Toxicity LC50 > 4224 mg/m3, 4 hr, (rat). Acute dermal Toxicity LD50 >2000 mg/kg (rat). Skin Irritation – irritating to skin (rabbit). Eye Irritation – slight irritant (rabbit). Sensitization Dermal: sensitizer (gunea pig, Magnusson/Kligman (maximization test)). Repeated Dose toxicity: Subacute oral toxicity: NOAEL: 1000 mg/kg (rat). Mutagenicity: Genetic Toxicity in Vitro: Salmonella/microsome test (Ames test) No indication of Mutagenic effects. Chromosome aberration test in vitro: negative. Genetic Toxicity in Vivo: Micronucleus test: negative (mouse) – negative.
Component ALIPHATIC CARBOXYLIC ESTER CAS# 623-91-6: Acute Oral Toxicity LD50 >1,780 mg/kg (rat)

SECTION 12: ECOLOGICAL INFORMATION

No data for the product itself.
Component data:
Component CAS# 64742-95-6 Toxic to aquatic organisms.
Component Ethyl Benzene (a minor component of CAS# 64742-95-6): Biodegradation, Aerobic, 50%, Exposure time 28 days. .Biochemical Oxygen demand (BOD) 5 days, 2.8% and 35 days, 1780 mg/g. Bioaccumulation: Cyprinus carpio (Carp), 15 BCF. Acute and Prolonged Toxicity to Fish LC50: 12.1 mg/l (fathead minnow, 96 h). Acute Toxicity to Aquatic Invertebrates EC50: 1.8-2.9 mg/l (water flea, 48 h). Toxicity to Aquatic Plants EC50: 4.6 mg/l (green algae, 72 h). Toxicity to microorganisms EC50: 130 mg/l (activated sludge microorganisms, 48 hr).
Component Xylene (a minor component of CAS# 64742-95-6): Acute Toxicity: Fish: Toxic 1 < LCECIC50 < 10mg/l, Aquatic Invertabrates: Toxic 1 < LC/EC/IC50 <10mg/l, Algae: Toxic 1 < LC/EC/IC50 <10 mg/l. Mobility – floats on water. If it enters the soil it will be highly mobile and may contaminate groundwater. Oxidises rapidly by photo-chemical reactions in air.
Component Cumene (a minor component of CAS# 64742-95-6): LC50 (fish) 1-10 mg/l.
Component CAS# 95-63-6: Toxicity to fish LC50 (fathead minnow) 7.72 mg/l 96 hr. Toxicity to daphnia and other aquatic invertebrates: Immobilization EC50 (water flea) 3.6mg/l 48hr.
Component CYCLOALIPHATIC DIAMINE CAS# 136210-30-5 : (toxicity note: Toxicity data based on a similar product) 13% Exposure time: 28 days, i.e., not readily degradable (based on a comparable product). Acute and Prolonged Toxicity to fish: LC50: 66 mg/l (Danio rerio (zebra fish), 96 hr). Acute Toxicity to Aquatic Vertabras EC50: 88.6 mg/l (water flea), 48 hr). Toxicity to Aquatic Plants IC50: 113 mg/l (scenedesmus subspicatus, 72 hr). Toxicity to Microorganisms EC50: 3110 mg/l (activated sludge, 3 hr). .
Component ALIPHATIC CARBOXYLIC ESTER CAS# 623-91-6: Biodegradation: 92-95%, i.e., readily biodegradable. Acute and Prolonged Toxicity to Fish LC50: 38 mg/l (fathead minnow, 96 hr).

SECTION 13: WASTE DISPOSAL

WASTE DISPOSAL METHOD:
DISPOSE OF MATERIAL AS A HAZARDOUS WASTE ACCORDING TO FEDERAL, STATE, AND LOCAL REGULATIONS.

SECTION 14: Transport Information

DOT: UN1993, FLAMMABLE LIQUID N.O.S. (CONTAINS AROMATIC PETROLEUM DISTILLATES), 3, PG III

IMO/IMDG: UN1993, FLAMMABLE LIQUID N.O.S. (CONTAINS AROMATIC PETROLEUM DISTILLATES), 3, PG III

SECTION 15: REGULATORY INFORMATION

No data for the product itself.
Component data:
Component CAS# 64742-95-6 This product is a hazardous chemical . This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372 Component 1,2,4-trimethylbenzene CAS# 95-63-6 at < 42% and xylene CAS# 1330-20-7 at < 3.0%, Cumene CAS# 98-82-8 at < 2%, and Ethylbenzene CAS# 100-41-4 at < 0.40%.. This component contains chemicals on the California Proposition 65 list that may cause cancer or reproductive harm. Component is on the TSCA list as well as the AICS, DSL, ECL, EINECS, ENCS, IECSC and PICCS lists
Component Ethyl Benzene (a minor component of CAS# 64742-95-6): US EPA CERCLA Hazardous Substances (40 CFR 302): Ethyl Benzene reportable quantity 1000 lbs. US EPA Emergency Planning and Community Right to Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.5) components, Ethyl Benzene. California Prop 65: This product contains chemicals known to the State of California to be carcinogenic: Ethyl Benzene CAS# 100-41-4 @ 0.39% Massachusetts, New York, Pennsylvania Right to Know list includes the following components: Ethyl Benzene CAS# 100-41-4. Massachusetts, New York, Pennsylvania Special hazardous Substance includes the following components: Ethyl Benzene CAS# 100-41-4
Component Xylene (a minor component of CAS# 64742-95-6): Xylene contains EPCRA section 313 chemicals subject to the reporting requirements of the emergency planning and community right to know act of 1968. Xylene and its components are on the California Proposition 65 list for developmental toxicity, Reproductive toxicity and carcinogen list. Ingredients are on the TSCA list, DSL Canada, AICS, China, EINECS, ENCS, Korea, New Zealand, Phillipines inventory lists and on the Massachusetts, New Jersey, Pennsylvania right to know lists
Component Cumene (a minor componebt of CAS# 64742-95-6): is a SARA 313 chemical. This component is a CERCLA chemical. This component is a California Proposition 65 Chemical which is known to cause cancer or other birth defects or reproductive harm. This component is on the New Jersey right to know list. Component is on the TSCA list and Canada DSL list.
Component CAS# 95-63-6: This component is subject to SARA Title III Section 313 reporting. This component is in the TSCA and Canada DSL Lists. This component is on the Massachusetts, Pennsylvania, New Jersey right to know lists.
Component CYCLOALIPHATIC DIAMINE CAS# 136210-30-5 : OSHA Hazard rating : Hazardous.Component is listrd on the TSCA and Canada DSL lists. Component is listed on the Pennsylvania, Massachusetts and New Jersey Right to know lists.
Component ALIPHATIC CARBOXYLIC ESTER CAS# 623-91-6: OSHA Hazard rating : Hazardous.Component is listrd on the TSCA and Canada DSL lists. Component is listed on the Pennsylvania, Massachusetts and New Jersey Right to know lists.

SECTION 16: OTHER INFORMATION

DISCLAIMER: THE INFORMATION HERE IN 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

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 341LV PART B
PRODUCT CODES: 341LV B

MANUFACTURER: Armorpoxy Inc
STREET ADDRESS: 1260 North Avenue
CITY, STATE, ZIP: Plainfield, NJ 07062

INFORMATION PHONE: 888-755-7361
EMERGENCY PHONE: Chemtrec 800-424-9300
FAX PHONE: (973) 453-8114

PREPARED BY: Armorpoxy Inc

DATE REVISED: 11/30/15

Chemical Name or Class: isocyanate/solvent mixture

SECTION 2: HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: **Respiratory Sensitization category 1, Flammable Liquids category 3, Skin sensitizer category 1B, Acute toxicity (inhalation) category 4, skin irritation category 2, Eye irritation category 2A, Germ cell mutagenicity category 1B, carcinogenicity category 2, Specific target organ toxicity – single exposure category 3, Specific target organ toxicity – repeated exposure category 2, Chronic hazards to aquatic environment category 3**

GHS Label Elements and Precautionary Statements:
Label Elements: Flame, Health hazard, Exclamation Mark

Hazard Statements:
Danger: May cause allergy or Asthma symptoms or breathing difficulties if inhaled
Warning: Flammable liquid and vapor.
Warning: May Cause an allergic skin reaction.
Warning: Harmful if inhaled.
Warning: Causes skin irritation
Warning: Causes serious eye irritation.
Warning: Suspected of causing genetic defects.
Warning: Suspected of causing cancer.
Warning: May cause Respiratory irritation or may cause drowsiness or dizziness.
Warning: May cause damage to organs (liver, kidney, nervous system, respiratory system, liver, central nervous system) through prolonged or repeated exposure
Harmful 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
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/…/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P272 Contaminated work clothing should not be allowed out of the workplace.
P271 Use only outdoors or in a well-ventilated area
P264 Wash hands thoroughly after handling.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
Response
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/showerP370 + P378 In case of fire: Use FOAM, ALCOHOL FOAM, CO2, WATER FOG for extinction.
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.
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.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
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.
P314 Get medical advice/attention if you feel unwell
Storage:
P403 + P235 Store in a well-ventilated place. Keep cool
P233 Keep container tightly closed.
Disposal:
P501 Dispose of contents/container to a waste disposal facility in accordance with local, state, federal or international laws

HMIS HAZARD CLASSIFICATION
HEALTH: 3 FLAMMIBILITY: 2 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: G

POTENTIAL HEALTH EFFECTS
EYES:
WILL CAUSE SEVERE IRRITATION TO THE EYES. HIGH VAPOR CONCENTRATIONS CAN CAUSE SEVERE IRRITATION TO THE EYES.
SKIN:
WILL CAUSE SEVERE IRRITATION TO THE SKIN
INGESTION:
LIQUID CAN CAUSE SEVERE DAMAGE TO MUCOUS MEMBRANES IF SWALLOWED.
INHALATION:
HIGH CONCENTRATIONS OF VAPOR CAN CAUSE IRRITATION TO THE RESPIRATORY TRACT, NAUSEA AND DIZZINESS.
HEALTH HAZARDS (ACUTE AND CHRONIC):
PROLONGED OR REPEATED EXPOSURE MAY CAUSE ASTHMA AND SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSES. CAN CAUSE SENTIZATION BY EXPOSURE THROUGH CONTACT OR HIGH CONCENTRATION OF VAPOR. OVER EXPOSURE TO THIS MATERIAL CAN CAUSE CARDIAC ABNORMALITIES, ANEMIA, LIVER ABNORMALITIES, KIDNEY DAMAGE OR EVEN EYE DAMAGE. CAN CAUSE ASTHMA OR OTHER RESPIRATORY DISORDERS, BRONCHITIS, EMPHYSEMA, HYPERACTIVITY, AND EXCEMA.
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 xposure 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 AILMENTS
CARCINOGENICITY
OSHA: NO NTP: NO IARC: yes
ADDITIONAL CARCINOGENICITY INFORMATION: Product may contain ethyl benzene as a component of Aromatic Petroleum Distillates (IARC 2B)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO.	OSHA PEL	ACGIH TLV	OSHA STEL	WEIGHT %
HOMOPOLYMER OF HDI	28182-81-2	1mg/m3	NONE	NONE	30-60
HEXAMETHYLENE DIISOCYANATE (HDI)	822-06-0	NONE	NONE	NONE	<0.5
AROMATIC PETROLEUM DISTILLATES	64742-95-6	100ppm	100ppm	NONE	30-60
*cumene (as a component of 64742-95-6)	98-82-8	50ppm	50ppm	NONE	(<1%)
*1,2,4-Trimethylbenzene as a component of 64742-95-6	95-63-6	25ppm	NONE	NONE	(<202%)
*ethyl benzene (as a component of 64742-95-6	100-41-4	100ppm	100ppm	125ppm	(<0.2)
*Xylene (as a component of CAS# 64742-95-6)	1330-20-7	100PPM	100PPM	150PPM	(<1.5%)

***INDICATES TOXIC CHEMICAL(S) SUBJECT TO THE 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:
IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE LIFTING UPPER AND LOWER LIDS. GET IMMEDIATE MEDICAL ASSISTANCE.
SKIN:
FLUSH SKIN WITH WATER FOR AT LEAST 15 MINUTES AND REMOVE ALL CONTAMINATED CLOTHING IMMEDIATELY. GET MEDICAL ATTENTION IF REDDENING OR SWELLING OCCURS.
INGESTION:
DO NOT INDUCE VOMITING. DILUTE BY GIVING WATER OR MILK TO DRINK IF VICTIM IS CONSCIOUS. GET MEDICAL ATTENTION IMMEDIATELY.
INHALATION:
REMOVE TO FRESH AIR IF EFFECTS PERSIST AND ADMINISTER OXYGEN IF NECESSARY.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, (% by volume) **UPPER:** N/A **LOWER:** N/A
FLASH POINT: 100-140F
METHOD USED:
SETA FLASH
EXTINGUISHING MEDIA:
FOAM, ALCOHOL FOAM, CO_2, WATER FOG
SPECIAL FIRE FIGHTING PROCEDURES:
TOXIC FUMES WILL BE EVOLVED WHEN THIS MATERIAL IS INVOLVED IN A FIRE. A SELF-CONTAINED BREATHING APPARATUS SHOULD BE AVAILABLE FOR FIRE FIGHTERS. COOL FIRE EXPOSED CONTAINERS WITH WATER.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
NONE KNOWN

SECTION 6: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
AVOID CONTACT WITH MATERIAL. WEAR THE APPROPRIATE SAFETY EQUIPMENT. STOP SPILL AT SOURCE, DYKE AREA TO PREVENT SPREADING. PUMP LIQUID TO SALVAGE TANK. TAKE UP REMAINDER WITH CLAY OR OTHER ABSORBANT AND PLACE IN DISPOSAL CONTAINERS.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS. RESEAL PARTIALLY USED CONTAINERS. PROPERLY LABEL ALL CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. OBSERVE CONDITIONS OF GOOD INDUSTRIAL HYGIENE AND SAFE WORKING PRACTICES.
OTHER PRECAUTIONS:
MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS, THEREFORE, READ THE MSDS OF ALL COMPONENTS TO BECOME FAMILIAR WITH ALL HAZARDS PRIOR TO USING THIS PRODUCT.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:
NIOSH APPROVED RESPIRATOR PROTECTION REQUIRED IN THE ABSENCE OF PROPER ENVIRONMENTAL CONTROLS, FOR EMERGENCIES A SELF-CONTAINED BREATHING APPARATUS OR A FULL FACE RESPIRATOR IS RECOMMENDED.
VENTILATION:
AVOID BREATHING VAPORS. VENTILATION MUST BE SUFFICIENT TO CONTROL VAPORS.
PROTECTIVE GLOVES:
IMPERVIOUS GLOVES, NEOPRENE OF RUBBER.
EYE PROTECTION:
SPLASH PROOF GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
CLEAN BODY COVERING CLOTHING AS WELL AS APRON FOOTWEAR OR OTHER EQUIPMENT SHOULD BE USED AS DEEMED NECESSARY TO AVOID CONTACT WITH THE MATERIAL.
WORK HYGIENIC PRACTICES:
OBSERVE GENERAL GOOD HYGIENIC PRACTICES.

SEE SECTION THREE FOR OCCPATIONAL EXPOSURE LIMIT VALUES.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: CLEAR LIQUID WITH AROMATIC SOLVENT ODOR
BOILING POINT OR RANGE: N/A

VAPOR DENSITY (AIR = 1): Not available
SPECIFIC GRAVITY (H2O = 1): 1.0
EVAPORATION RATE: N/A
SOLUBILITY IN WATER: NEGLIGIBLE

Odor Threshhold: 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 CONTACT WITH OPEN FLAMES AND ALL SOURCES OF IGNITIONS AND SPARKS.
INCOMPATIBILITY (MATERIAL TO AVOID):
AVOID CONTACT WITH STRONG OXIDIZING AGENTS, MINERAL ACIDS AND EPOXY RESINS IN UNCONTROLLED AMOUNTS.
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:
CO, CO2, NOX
HAZARDOUS POLYMERIZATION:
WILL NOT OCCUR

SECTION 11: TOXICOLOGICAL INFORMATION

No data for the product itself.
Component data:
COMONENT Homopolymer of HDI: Acute Oral Toxicity LD50 >5000 mg/kg (rat). Acute Inhalation Toxicity LC50 390-453 mg/m3, arosol, 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).
Component CAS# 64742-95-6 Test on similar materials show a low order of acute oral and dermal toxicity. May cause eye irritation, may cause irritation on skin and mucous membranes.
Component Ethyl Benzene (a minor component of CAS# 64742-96-6): Acute Oral toxicity LD50: ca. 3500 mg/kg (rat); Acute inhalation LC50: 17.2 mg/l 4h (rat); Acute Dermal Toxicity: 17,800 mg/kg (rabbit); Skin Irritation rabbit Draize exposure time 24h – slightly irritating. Eye Irritation rabbit Draize – severely irritating. Sensitization dermal (human patch test) non-sensitizer.Repeated Dose toxicity 28 days inhalation NOAEL: 3.4 mg/l (rabbit). Mutagenicity Genetic Toxicity in Vitro: Ames: Negative (salmonella typhimurium, metabolic activation with/without). Carcinogenecity: Ethyl benzene was tested by inhalation exposure in mice and rats. Ibn mice, there was an increased incidence of lung adenomas in males and liver adenomas in females. In male rats, there was an increased incidence of renal tubule adenomas and carcinomas. Two Studies of workers potentially exposed to ethyl benzene in a production plant and a styrene polymerization plant, showed no excess cancer incidence and no excess cancer mortalitry during a 15 year follow-up. Toxicity to Reproduction/Fertility: Inhalation (monkey, male) Reproductive effects have been observed in animal studies, In a generation study, inhalation (rat/female) NOAEL (parental): 100ppm NOAEL (F2): 100ppm. Developmental Toxicity/Teratogenicity rat, female, inhalation, gestation, daily, NOAEL (teratogenicity): 100ppm (maternal): 100ppm. Tratogenetic effects seen only with maternal toxicity., Fetotoxicity seen only with maternal toxicity. Rabbit, female, inhalation, gestation, daily, NOAEL (teratogenicity) < 1000 mg/m3, NOAEL (maternal) < 1000 mg/m3.
Component Xylene (a minor component of CAS# 64742-95-6): Inhalation LC50 26800ppm, Skin LD50 2000 mg/kg, Ingestion LD50 4.3 g/kg. Exposure may effect skin, eye, liver, kidney, nervous system, respiratory system and lungs. High concentrations may lead to nervous system effects. Repeated overexposure has produced toxic effects in developing and young laboratory animals. Aspiration into lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.
Component Cumene(a minor componebt of CAS# 64742-95-6): IARC has classified Cumene as possibly Carcinogenic to humans (group 2B).
Component CAS# 95-63-6: Oral LD50 (rat) = 5000 mg/kg. Inhalation LC50 (rat) -4h = 18000 mg/m3.

SECTION 12: ECOLOGICAL INFORMATION

No data for the product itself.
Component data:
COMONENT Homopolymer of HDI: Biodegradation: 0%, Exposure time: 28 days, not readily biodegradable. Acute and Prolonged Tocicity 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).
Component CAS# 64742-95-6 Toxic to aquatic organisms.
Component Ethyl Benzene (a minor component of CAS# 64742-95-6): Biodegradation, Aerobic, 50%, Exposure time 28 days. .Biochemical Oxygen demand (BOD) 5 days, 2.8% and 35 days, 1780 mg/g. Bioaccumulation: Cyprinus carpio (Carp), 15 BCF. Acute and Prolonged Toxicity to Fish LC50: 12.1 mg/l (fathead minnow, 96 h). Acute Toxicity to Aquatic Invertebrates EC50: 1.8-2.9 mg/l (water flea, 48 h). Toxicity to Aquatic Plants EC50: 4.6 mg/l (green algae, 72 h). Toxicity to microorganisms EC50: 130 mg/l (activated sludge microorganisms, 48 hr).

Component Xylene (a minor component of CAS# 64742-95-6): Acute Toxicity: Fish: Toxic 1 < LCECIC50 < 10mg/l, Aquatic Invertabrates: Toxic 1 < LC/EC/IC50 <10mg/l, Algae: Toxic 1 < LC/EC/IC50 <10 mg/l. Mobility – floats on water. If it enters the soil it will be highly mobile and may contaminate groundwater. Oxidises rapidly by photo-chemical reactions in air.
Component Cumene (a minor component of CAS# 64742-95-6): LC50 (fish) 1-10 mg/l.
Component CAS# 95-63-6: Toxicity to fish LC50 (fathead minnow) 7.72 mg/l 96 hr. Toxicity to daphnia and other aquatic invertebrates: Immobilization EC50 (water flea) 3.6mg/l 48hr.

SECTION 13: WASTE DISPOSAL

WASTE DISPOSAL METHOD:
DISPOSE OF MATERIAL AS A HAZARDOUS WASTE ACCORDING TO FEDERAL, STATE, AND LOCAL REGULATIONS.

SECTION 14: Transport Information

DOT: UN1993, FLAMMABLE LIQUID N.O.S. (CONTAINS AROMATIC PETROLEUM DISTILLATES), 3, PG III

IMO/IMDG: UN1993, FLAMMABLE LIQUID N.O.S. (CONTAINS AROMATIC PETROLEUM DISTILLATES), 3, PG III

SECTION 15: REGULATORY INFORMATION

No data for the product itself.
Component data:
COMPONENT Homopolymer of HDI: OSHA hazard rating – Hazardous. Listed on the TSCA and Canada DSL lists. Component is on the Massachusetts, New Jersey, and Pennslvania Rigth 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 Pennslvania Rigth to Know Lists.
Component CAS# 64742-95-6 This product is a hazardous chemical . This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372 Component 1,2,4-trimethylbenzene CAS# 95-63-6 at < 42% and xylene CAS# 1330-20-7 at < 3.0%, Cumene CAS# 98-82-8 at < 2%, and Ethylbenzene CAS# 100-41-4 at < 0.40%.. This component contains chemicals on the California Proposition 65 list that may cause cancer or reproductive harm. Component is on the TSCA list as well as the AICS, DSL, ECL, EINECS, ENCS, IECSC and PICCS lists
Component Ethyl Benzene (a minor component of CAS# 64742-95-6): US EPA CERCLA Hazardous Substances (40 CFR 302): Ethyl Benzene reportable quantity 1000 lbs. US EPA Emergency Planning and Community Right to Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.5) components, Ethyl Benzene. California Prop 65: This product contains chemicals known to the State of California to be carcinogenic: Ethyl Benzene CAS# 100-41-4 @ 0.39% Massachusetts, New York, Pennsylvania Right to Know list includes the following components: Ethyl Benzene CAS# 100-41-4. Massachusetts, New York, Pennsylvania Special hazardous Substance includes the following components: Ethyl Benzene CAS# 100-41-4
Component Xylene (a minor component of CAS# 64742-95-6): Xylene contains EPCRA section 313 chemicals subject to the reporting requirements of the emergency planning and community right to know act of 1968. Xylene and its components are on the California Proposition 65 list for developmental toxicity, Reproductive toxicity and carcinogen list. Ingredients are on the TSCA list, DSL Canada, AICS, China, EINECS, ENCS, Korea, New Zealand, Phillipines inventory lists and on the Massachusetts, New Jersey, Pennsylvania right to know lists
Component Cumene (a minor componebt of CAS# 64742-95-6): is a SARA 313 chemical. This component is a CERCLA chemical. This component is a California Proposition 65 Chemical which is known to cause cancer or other birth defects or reproductive harm. This component is on the New Jersey right to know list. Component is on the TSCA list and Canada DSL list.
Component CAS# 95-63-6: This component is subject to SARA Title III Section 313 reporting. This component is in the TSCA and Canada DSL Lists. This component is on the Massachusetts, Pennsylvania, New Jersey right to know lists.

SECTION 16: OTHER INFORMATION

DISCLAIMER: THE INFORMATION HERE IN 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