

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: UR 4401 A side
PRODUCT CODES: UR 4401 A side

MANUFACTURER: PENNTEK INDUSTRIAL COATINGS
STREET ADDRESS: 7850 LAKEVILLE BLVD
CITY, STATE, ZIP: LAKEVILLE, MN. 55044

INFORMATION PHONE: 844-290-9364
EMERGENCY PHONE: Infotrac 1-800-535-5035

PREPARED BY: Kyle Baynes

DATE REVISED: 5/3/21

Chemical Name or Class: POLYACRYLATE SOLUTION

SECTION 2: HAZARDS IDENTIFICATION**Hazard Overview**

GHS Classification: Skin corrosion/irritation category 2, serious eye damage/ eye irritation category 2B, Long term hazard to aquatic Environment category 3

GHS Label Elements and Precautionary Statements:

Label Elements: Exclamation Mark

**Hazard Statements:**

Warning: Causes skin irritation

Warning: Causes eye irritation

Harmful to aquatic life with long lasting effects

Precautionary statements:

P102 Keep out of reach of children.

P103 Read label before use

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

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.

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

Disposal:

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

HMIS HAZARD CLASSIFICATION

HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: G

POTENTIAL HEALTH EFFECTS**EYES:**

MATERIAL OR HIGH VAPOR CONCENTRATION CAN CAUSE IRRITATION TO THE EYES.

SKIN:

CAN CAUSE IRRITATION TO SKIN.

INGESTION:

LIQUID CAN CAUSE IRRITATION TO THE MUCOUS MEMBRANES IF SWALLOWED.

INHALATION:

HIGH VAPOR CONCENTRATION CAN CAUSE IRRITATION TO THE RESPIRATORY TRACT.

HEALTH HAZARDS (ACUTE AND CHRONIC):

PROLONGED OR REPEATED EXPOSURE MAY CAUSE ASTHMA AND SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSES.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

RESPIRATORY CONDITIONS OR OTHER ALLERGIC AILMENTS. Repeated or prolonged exposure of high levels of solvents via inhalation and ingestion may affect the liver or central nervous system.

CARCINOGENICITY

OSHA: NO NTP: NO IARC: NO

ADDITIONAL CARCINOGENICITY INFORMATION:



CAS# 111-76-2: May contain trace components of benzene, toluene, ethylbenzene and NJTSRN 800963-5170 and contains chemicals known to the state of California to cause cancer and birth defects.

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>
Triethanolamine	102-71-6	none	5mg/m3	none	<3.0
Propylene glycol n-butyl ether	5131-66-8	none	none	none	<3.0
Water	7732-18-5	none	none	none	40-60
Polyacrylate resin	trade secret	none	none	none	30-50
Reactive diluent	trade secret	none	none	none	<3.0
Dipropylene glycol methyl ether acetate	88917-22-0	none	none	none	<4.0
dipropylene glycol monomethyl ether	34590-94-8	100ppm	150ppm	600ppm	<1.0
*2-butoxyethanol	111-76-2	50ppm	20ppm	none	<0.5
2-ethyl-1-hexanol	104-76-7	none	none	none	<0.5
naphtha, petroleum, heavy	64742-82-1	none	none	none	<0.5
2,5,8,11 tetramethyl 6 dodecyn-5,8 diol ethoxylate	169117-72-0	none	none	none	<1.0
additive	NJTSRN 800963-5023	none	none	none	0.1-1
Polyether and polyethersiloxane emulsion	Not Available	NONE	NONE	NONE	0.1-1
Butylated hydroxytoluene (component of Polyether and polyethersiloxane emulsion)	128-37-0	10mg/m3	10mg/m3	NONE	<0.00001
Ethanol, 2-amino- (component of Polyether and polyethersiloxane emulsion)	141-43-5	3ppm	NONE	NONE	<0.005
cyclohexane (component of Polyether and polyethersiloxane emulsion)	110-82-7	300ppm	300ppm	NONE	<0.00001
Ethanol (component of Polyether and polyethersiloxane emulsion)	64-17-5	1000ppm	1000ppm	NONE	<0.0001
poly(oxy-1,2-ethanediyl), a-octadecyl-w-w-hydroxy- (component of Polyether and polyethersiloxane emulsion)	9005-00-9	NONE	NONE	NONE	<0.1

SECTION 3 NOTES: (*) TOXIC CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III AND OF 40 CFR 372 ARE PRESENT.

SECTION 4: FIRST AID MEASURES

EYES:

IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST FIFTEEN MINUTES WHILE LIFTING UPPER AND LOWER LIDS. GET IMMEDIATE MEDICAL ATTENTION.

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 VOMITTING. INGESTION OR VOMITING MAY CAUSE ASPIRATION INTO THE LUNGS RESULTING IN CHEMICAL PNEUMONITIS.

INHALATION:

REMOVE VICTIM 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: not available
LOWER: not available

FLASH POINT: >200°F

METHOD USED:

SETA FLASH

EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, 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 ALL 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 THE REMAINDER WITH AN ABSORBENT SUCH AS CLAY 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 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:

NONE REQUIRED UNDER NORMAL CONDITIONS OF USE. NIOSH APPROVED AIR-SUPPLIED RESPIRATOR DURING THE CLEANING, HIGH TEMPERATURE PROCESSING OR WHEN THERMAL DECOMPOSITION IS SUSPECTED.

VENTILATION:

AVOID BREATHING VAPORS. VENTILLATION 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 EQUIPMENT SHOULD BE USED AS DEEMED NECESSARY TO AVOID CONTACT WITH THE 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: low viscosity liquid – milky white color – NEGLIGIBLE ODOR

BOILING POINT OR RANGE: N/A

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H₂O = 1): 1.08

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: emulsifiable/miscible

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 CONTACT WITH OPEN FLAMES AND ALL SOURCES OF IGNITIONS AND SPARKS. Protect from freezing.

INCOMPATIBILITY (MATERIAL TO AVOID):

AVOID CONTACT WITH STRONG OXIDIZING AGENTS OR MATERIALS.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

CARBON MONOXIDE, CARBON DIOXIDE AND NITROGEN COMPOUNDS.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR.

SECTION 11: TOXICOLOGICAL INFORMATION



No data for the product itself.

Component data:

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

Component 2,5,8,11 tetramethyl 6 dodecyn-5,8 diol ethoxylate CAS# 169117-72-0: LD50 Ingestion > 2000 mg/kg – rat; Dermal LD 50 > 2000 mg/kg – rabbit; severe eye irritant; mild skin irritant; Not mutagenic in Ames test.

CAS# 111-76-2: Acute oral Toxicity -LD50 rat 530 mg/kg; LD50 rabbit 520 mg/kg; Acute dermal Toxicity LD50 Rabbit 100mg/kg; Acute Inhalation Toxicity LC50 rat 468ppm (4h); Skin Irritation rabbit – moderate skin irritation.; Eye irritant - rabbit

CAS# 104-76-7: Acute Oral Toxicity: LD50 rat > 5000mg/kg.; Acute Dermal Toxicity rabbit 1970 mg/kg.; Skin Irritation rabbit – moderate skin irritation.; severe eye irritant - rabbit

CAS# 64742-82-1: Acute Oral Toxicity LD50 > 5000 mg/kg; Acute Dermal Toxicity LD50 rabbit > 3000 mg/kg; Acute inhalation Toxicity LC50 rat > 11.6 mg/l; Skin Irritation rabbit – moderate skin irritation.; Eye Irritant – Rabbit.

CAS# 34590-94-8: Acute Oral Toxicity (LD50) 5130 mg/kg rat; Acute Dermal Toxicity (LD50) 9500 mg/kg rabbit; May cause damage to the liver, central nervous system. Hazardous in case of ingestion or inhalation. Slight skin irritant. Eye contact can cause corneal irritation.

Dipropylene glycol methyl ether acetate CAS# 88917-22-0: is toxic to lungs, is very hazardous in case of ingestion, is hazardous in case of skin contact (irritant, permeator), of inhalation.

Polyacrylate resinCAS# trade secret: Acute oral toxicity LD50 > 2000mg/kg (rat); Skin irritation – (4h) no skin irritation; Eye irritation – rabbit, slightly irritating. Mutagenicity, Genetic Toxicity in Vitro: Ames – negative.

Propylene glycol n-butyl ether CAS# 5131-68-8: Acute Oral Toxicity LD50 – 1900 mg/kg rat; Acute Dermal Toxicity LD50 3100 mg/kg rabbit; Skin Irritation – irritating (rabbit); Eye Irritation rabbit – irritating. Repeated Dose Toxicity: 11 d, inhalation NOAEL < 600 ppm (rat). Biodegradation > 90% exposure time 28 d; Acute Toxicity to Aquatic Vertebraes EC50 . 1000 mg/ml (water flea)

Triethanolamine CAS# 102-71-6: Acute Oral Toxicity LD50 4190 mg/kg (rat); Acute Dermal Toxicity LD50 > 2000 mg/kg (rabbit); Skin Irritation (rabbit) slightly irritating. Eye Irritation (rabbit) irritating. Repeated Dose Toxicity 28 days, inhalation NOAEL: > 0.5 mg/ml (rat, male/female, 6hrs/day 5 days/week and 13 weeks, dermal: NOAEL: 500mg/kg (rat, male/female, daily)

SECTION 12: ECOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component 2,5,8,11 tetramethyl 6 dodecyn-5,8 diol ethoxylate CAS# 169117-72-0: This product is anticipated to be harmful to aquatic organisms based on data from similar product.

Polyacrylate resinCAS# trade secret: Acute and Prolonged Toxicity to fish LC50 > 100mg/ml (Zebra Fish) 96 hr;

Triethanolamine CAS# 102-71-6: Biodegradation: Aerobic, 82% exposure time 8 days, inherently biodegradable. Biological Oxygen demand (BOD) 0.5 mg/g; Acute and Prolonged Toxicity to fish LC50 > 5000 mg/ml (fathead minnow), 96 h; Acute Toxicity to Aquatic Invertebrates EC50: 216-750 mg/l end point (green algae), 72 hr.

Propylene glycol n-butyl ether CAS# 5131-68-8: Biodegradation > 90% exposure time 28 d; Acute and Prolonged Toxicity to Fish LC50: 560-1000 mg/l (guppy); Acute Toxicity to Aquatic Invertebrates EC50 > 1000 mg/l (water Flea)

Component Polyether and Polysiloxane emulsion: Product is considered a weak water pollutant (German Law)

SECTION 13: WASTE DISPOSAL

WASTE DISPOSAL METHOD:.

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

SECTION 14: Transport Information

DOT: Not Regulated

IMO/IMDG: Not Regulated

SECTION 15: REGULATORY INFORMATION

No data for the product itself.

Component data:

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

CAS# 111-76-2: Section 313 toxic Chemical. Section 311 hazard category – Chronic, fire, On TSCA list. May contain trace components of benzene, toluene, ethylbenzene and NJTSRN 800963-5170 and contains chemicals known to the state of California to cause cancer and birth defects. All components on the DSL Canada

CAS# 104-76-7: - on TSCA list and on Canada DSL

CAS# 64742-82-1 – on TSCA and on Canada DSL

CAS# 34590-94-8: Is on the Canadian DSL (class B-3 combustible liquid), TSCA list and European inventory of existing commercial chemical substances. Dipropylene glycol monomethyl ether TSCA 4(a) proposed test rules: Dipropylene glycol monomethyl ether TSCA 8(d) and S data reporting: Dipropylene glycol monomethyl ether: effective 4/13/89: Sunset Date: 6/30/98

Dipropylene glycol methyl ether acetate CAS# 88917-22-0: DSCL (EEC) R36 – irritating to skin- risk of serious damage to eyes. WHIMS Class B-3

Polyacrylate resinCAS# trade secret: Listed on TSCA.

Propylene glycol n-butyl ether CAS# 5131-68-8: Listed on TSCA

Triethanolamine CAS# 102-71-6: Listed on TSCA

Reactive diluent CAS# trade secret: On New Jersey, Massachusetts and Pennsylvania right to know lists at > 1%



Component Polyether and Polysiloxane emulsion: Component Cyclohexane CAS# 110-82-7 is a SARA Section 313 Chemical. Product is on the Pennsylvania, Rhode Island, New Jersey WHMIS and Massachusetts Right to know Lists. Product is on the TSCA and 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



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: UR 4401 B SIDE
PRODUCT CODES: UR 4401 B SIDE

MANUFACTURER: PENNTEK INDUSTRIAL COATINGS
STREET ADDRESS: 7850 LAKEVILLE BLVD
CITY, STATE, ZIP: LAKEVILLE, MN. 55044

INFORMATION PHONE: 844-290-9364
EMERGENCY PHONE: Infotrac 1-800-535-5035

PREPARED BY: Kyle Baynes

DATE REVISED: 5/3/21

CHEMICAL NAME OR CLASS: HDI ISOCYANATE

SECTION 6: HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: Respiratory sensitizer category 1B, skin sensitizer category 1B, Acute toxicity inhalation category 4, Specific target organ toxicity – single exposure category 3, Specific target organ toxicity – repeated exposure category 2, Acute hazard to aquatic environment category 3

GHS Label Elements and Precautionary Statements:

Label Elements: Health Hazard Exclamation Mark



Hazard Statements:

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

Warning: May cause an allergic skin reaction

Warning: Harmful if inhaled

Warning: May cause respiratory irritation.

Warning: May cause damage to organs (lungs) through prolonged or repeated exposure.

Harmful to aquatic life

Precautionary statements:

P102 Keep out of reach of children.

P103 Read label before use

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

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

P280 Wear protective gloves and clothing to prevent skin contact.

P271 Use only outdoors or in a well-ventilated area

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

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

P314 Get medical advice/attention if you feel unwell

Storage:

P405 Store locked up.

P403 + P233 Store in a well-ventilated place. 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: 1

REACTIVITY: 1

PERSONAL PROTECTIVE EQUIPMENT: G

POTENTIAL HEALTH EFFECTS

EYES:

CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, OR BLURRED VISION AS WELL AS CORNEAL OPACITY AND CONJUNCTIVITIS. MAY CAUSE TEMPORARY CORNEAL INJURY.

SKIN:



MAY CAUSE IRRITATION, DEFATTING AND DERMATITIS. MAY CAUSE SENSITIZATION. PERSONS PREVIOUSLY SENSITIZED CAN EXPERIENCE ALLERGIC SKIN REACTION.

INGESTION:

CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITTING, DIARRHEA. ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL. CAN CAUSE CORROSIVE ACTION TO THE MUCOUS MEMBRANES AND DIGESTIVE TRACTS.

INHALATION:

CAN CAUSE NAUSEA AND RESPIRATORY IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, HEADACHE, AND POSSIBLE UNCONSCIOUSNESS. BURNING SENSATION TO MUCOUS MEMBRANES, SHORTNESS OF BREATH AND FLU LIKE SYMPTOMS MAY OCCUR. AS A RESULT OF PREVIOUS EXPOSURES, CERTAIN INDIVIDUALS MAY DEVELOP SENSITIZATION TO DIISOCYANATES, WHICH MAY CAUSE THEM TO REACT TO A LATER EXPOSURE. SYMPTOMS INCLUDE CHEST TIGHTNESS, WHEEZING, COUGH, SHORTNESS OF BREATH, OR ASTHMATIC ATTACK. EXTREME ASTHMATIC ATTACKS CAN BE LIFE THREATENING.

HEALTH HAZARDS (ACUTE AND CHRONIC):

CAN CAUSE SENSITIZATION BY EXPOSURE THROUGH CONTACT OR HIGH CONCENTRATIONS OF VAPOR. OVER-EXPOSURE TO THIS MATERIAL CAN CAUSE CARDIAC ABNORMALITIES. OVEREXPOSURE CAN POSSIBLY CAUSE ANEMIA, LIVER ABNORMALITIES, KIDNEY DAMAGE, OR EYE DAMAGE. MAY CAUSE ASTHMA OR OTHER RESPIRATORY DISORDERS, BRONCHITIS, EMPHYSEMA, HYPERACTIVITY, AND ECZEMA.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

RESPIRATORY CONDITIONS OR OTHER ALLERGIC AILMENTS

CARCINOGENICITY

OSHA: NO NTP: NO IARC: NO

ADDITIONAL CARCINOGENICITY INFORMATION: NO LISTED INGREDIENTS OF THIS PRODUCT ARE REGULATED AS CARCINOGENS.

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>
HOMOPOLYMER OF HDI	28182-81-2	0.5mg/m3	NONE	NONE	60-100
HEXAMETHYLENE DIISOCYANATE (HDI)	822-06-0	NONE	.005 PPM	NONE	<0.25

***No toxic chemicals subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present.

HDI: ORAL LD50>10,000 mg/kg (RATS), INHALATION LC50 RANGES FROM 137 TO 1150 mg/m3, EYE IRRITATION SCORE 54.6/110 FOR A 24 HOUR EXPOSURE, SKIN EXPOSURE- MODERATE IRRITANT IRRITATION SCORE 3.4/8 (RABBIT)

SECTION 4: FIRST AID MEASURES

EYES:

IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. GET IMMEDIATE MEDICAL ASSISTANCE.

SKIN:

FOR EXTREME EXPOSURE USE A SAFETY SHOWER IMMEDIATELY. WASH AFFECTED AREA WITH SOAP AND WATER AND REMOVE CONTAMINATED CLOTHING PROMPTLY.

INGESTION:

DO NOT INDUCE VOMITING KEEP PERSON WARM AND CONSULT A PHYSICIAN IMMEDIATELY. GIVE 1-2 CUPS OF MILK OR WATER TO DRINK.

INHALATION:

REMOVE TO FRESH AIR IF EFFECTS PERSIST AND ADMINISTER OXYGEN IF NECESSARY. OBTAIN MEDICAL ASSISTANCE. ASTHMATIC TYPE SYMPTOMS MAY OCCUR IMMEDIATELY OR BE DELAYED FOR SEVERAL HOURS.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

EYES: STAIN FOR EVIDENCE OF CORNEAL INJURY. IF CORNEA IS BURNED, INSTILL ANTIBIOTIC/STEROID PREPARATION AS NEEDED. WORKPLACE VAPORS COULD PRODUCE REVERSABLE 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 SHOULD BE REMOVED FROM FURTHER EXPOSURE TO ANY ISOCYANATE.

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

SPECIAL FIRE FIGHTING PROCEDURES:



ENTER CONFINED AREA WITH FULL BUNKER GEAR INCLUDING A POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS. DURING A FIRE, HDI VAPORS AND OTHER HIGHLY TOXIC VAPORS MAY BE GENERATED. WATER OR EXTREME HEAT MAY CAUSE CONTAINERS TO EXPLODE.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

WATER CONTAMINATION MAY CAUSE THE GENERATION OF CO₂ AND CAUSE CONTAINER TO BURST OR EXPLODE. EXTREME HEAT MAY CAUSE CONTAINER TO EXPLODE. HAZARDOUS DECOMPOSITION PRODUCTS EVOLVED IN A FIRE MAY BE IRRITATING OR TOXIC.

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 SPARK PROOF EQUIPMENT, AND THE REMAINDER 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.

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 & 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 AIRBORN CONCENTRATIONS OF HDI BELOW THEIR TLV AND MGL MAXIMUM. REFERS TO PATTY'S INDUSTRIAL HYGIENE & 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 PROOF GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS. DO NOT WEAR CONTACT LENSES WHEN USING THIS PRODUCT.

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 OCCUPATIONAL EXPOSURE LIMIT VALUES.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: PALE YELLOW LIQUID WITH NEGLIGIBLE ODOR

BOILING POINT OR RANGE: N/A

VAPOR DENSITY (AIR = 1): 5.2 X 10⁻⁹ @ 68F mm/Hg

SPECIFIC GRAVITY (H₂O = 1): 1.15

FLASH POINT: 365F

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 AS WELL AS ALL SOURCES OF IGNITIONS 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 MONOXIDE, CARBON DIOXIDE, 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

Acute Oral Toxicity: LD50 > 5000 mg/kg (rat)

Acute inhalation Toxicity: LC50: 390-453 mg/m3 aerosol, 4 hrs (rat); RD50: 20.8 mg/m3

Acute Dermal Toxicity: >5000 mg/m3 (rabbit)

Skin Irritation: rabbit, Draize, slightly irritating

Eye Irritation: rabbit, Draize, slightly irritating

Sensitization: dermal: sensitizer (guinea pig, Maximisation Test (GPMT))

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)

Mutagenicity: genetic toxicity in vitro: Ames negative (salmonella typhimurium, metabolic activation with/without)

SECTION 12: ECOLOGICAL INFORMATION

Biodegradation: 0%, exposure time 28 days, not readily biodegradable

Acute and prolonged toxicity to fish: LC50 > 100 mg/l (zebra fish), 96 hrs

Acute toxicity to aquatic invertebrate: ECO: >100 mg/l (water flea) 48 hrs

Toxicity to aquatic plants: EC50 > 1000 mg/l (green algae), 72 hrs

Toxicity to microorganisms: EC50 > 1000 mg/l (activated sludge microorganisms), 3 hrs

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: Not regulated

IMO/IMDG: Not Regulated

SECTION 15: REGULATORY INFORMATION

OSHA Hazcom standard Rating: Hazardous;

All ingredients are on the TSCA list

Massachusetts, New Jersey or Pennsylvania Right to know substance list

60-100% Homopolymer of hexamethylene diisocyanate

15-25% hydrophilic aliphatic polyisocyanate based on hexamethylene diisocyanate

>1% hydrophilic aliphatic polyisocyanate based on hexamethylene diisocyanate

<0.25% hexamethylene-1,6-diisocyanate (*hazardous substance list)

28182-81-2

CAS# trade secret

CAS# trade secret

822-06-0

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