



High Performance Urethane (Colors)

Safety Data Sheet

SDS Revision Date: 5/1/2023

1. Product and Company Identification

Product Name	High Performance Urethane (Colors)
Product Codes	High Performance Urethane (Colors)
Manufacturer	Concrete Floor Solutions, Inc.
Street Address	6801 Tilghman Street #113
City, State, Zip	Allentown, PA 18106
Information Phone	610-366-0208
Emergency Phone	Chemtrec 800-424-9300
Prepared By	Jason Kehnel
Date Revised	5/1/2023
Chemical Name or Class	Polyester Polyol Solution

2. Hazards Identification

GHS Classification: Flammable liquid category 3, specific target organ toxicity - single exposure category 3, acute oral toxicity category 4, skin corrosion/irritation category 2, serious eye irritation category 2A, acute toxicity inhalation category 4, acute toxicity skin category 4, specific target organ toxicity repeated exposure category 2, acute hazard 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 respiratory irritation

Warning: Harmful if swallowed

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Warning: Causes skin irritation

Warning: Causes serious eye irritation

Warning: Harmful if inhaled

Warning: Harmful in contact with skin.

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

Harmful to aquatic life.

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.

P260 Do not breathing dust/fume/gas/mist/vapors/spray

P271 Use only outdoors or in a well-ventilated area.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

Response

P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P370 + P378 In case of fire: Use Foam, alcohol foam, CO2, dry chemical, water fog for extinction.

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

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

P301 + P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.

P330 Rinse mouth.

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.

P314 Get medical advice/attention if you feel unwell.

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Storage:

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

P405 Store locked up.

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

Other Non-classifiable potential hazards

Carcinogenicity category 2, (Ethyl benzene at less than 17% in a study done by the NTP was determined to not be carcinogenic.)

HMIS Hazard Classification

Health: 2 Flammability: 3 Reactivity: 0 Personal Protective Equipment: G

Potential Health Effects

Eyes: May cause corneal damage if left untreated which is slow to heal but usually reversible.

Skin: May cause irritation or allergic response. May cause defatting, dryness, cracking, rash, or redness or dermatitis.

Skin Absorption: Solvents can penetrate the skin causing effects similar to those for acute inhalation symptoms.

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: 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. Corneal damage is possible but usually reversible/ 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: Yes

Additional carcinogenicity information:

May Contain Ethyl Benzene (IARC possible carcinogen). Titanium Dioxide is listed by IARC as possibly carcinogenic to humans (group 2B). Some colors may contain carbon black -

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Explanation Of Carcinogenicity for carbon: IARC MONOGRAPHS ON EVALUATION OF CARCINOGENIC RISK OF CHEMICALS TO MAN, VOL 65, PG 149, 1996: GROUP 2B

3. Composition/Information on Ingredients

Ingredient	Cas No.	OSHA PEL	ACGIH TLV	OSHA STEL	Weight %
Propylene Glycol Monomethyl Ether Acetate	108-65-650 ppm				
Saturated Polyester Polyol (Non-hazardous)	Unknown				
Polyester Polyol	NJTSRN 0001C				
Siloxanes and Silicones, Di-me Reactions Products with Silica (Non-hazardous)	67762-90-7				
Siloxanes and Silicones, Di-methyl (Non-hazardous)	63148-62-9				
*Xylene	1330-20-7				
2,6-Dimethyl-4-Heptanone	108-83-8				
*Ethyl Benzene	100-41-4				
Polyalkylene Glycol	9038-95-3				
4,6-Dimethyl-2-Heptanone	19549-80-5				
Dibutyltin Dilaurate	77-58-7				
Cellulose Acetate Butyrate	9004-36-8				
Methyl N-Amyl Ketone	110-43-0				
Ethyl 3-Ethoxypropionate	763-69-9				
Additive	NJTSRN 800963-5023				
Colors May Contain @ 10-30%:					
Titanium Dioxide	13463-67-7				
*Carbon	1333-86-4				

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Acrylic Polymers (Non-hazardous)	Trade Secret				
C.I. Pigment Violet 19	1047-16-1				
Barium Sulfate	7727-43-7				
Zinc Salt of Alkyl Naphthalene Sulfonic Acid	Undisclosed				
Solvent Naphtha	64742-88-7				
Polyamine Polyester Polymer (Non-hazardous)					
C.I. Pigment Blue 15	147-14-8				
C.I. Pigment Blue	25869-00-5				
C11-C13 Isoparaffin	64741-65-7				
C.I. Pigment Green 17	1308-38-9				
Alkyl Polyether Phosphate Ester	Trade Secret				
C.I. Pigment Green 7	1328-53-6				
C.I. Pigment Green 36	14302-13-7				
C.I. Pigment Yellow	4531-49-4				
C.I. Pigment Yellow	5567-15-7				
C.I. Pigment Yellow 42	51274-00-1				
Pigment Orange	15793-73-4				
C.I. Pigment Red 101	1309-37-1				
C.I. Pigment Red 3	2425-85-6				
Aluminum Silicate Dehydrate	1332-58-7				
Mineral Spirits	8052-41-3				
C.I. Pigment Red 187	59487-23-9				

SECTION 3 NOTES: *Indicates 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. Xylene Stel= 150 PPM (ACGIH) Methyl N-Amyl Ketone Stel (ACGIH)= 100 PPM. Ethyl 3-Ethoxypropionate: USA

country specific exposure limits have not been established or are not applicable. Chemical company exposure limit (TLV) 50 ppm and (STEL) 100 ppm are recommended. Canada, Ontario OEL (Ministry of Labor – Control of Exposure) TWA 50ppm.

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

4. First Aid Measures

Eyes: Flush eyes with water for at least 15 minutes and consult a physician.

Skin: Wash affected areas with soap and water and remove contaminated clothing promptly.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person.

Consult a physician.

Inhalation: Remove to fresh air and administer oxygen if necessary. Consult a physician if necessary.

5. Fire Fighting Measures

Flammable limits in air (% by volume)	Upper: N/A Lower: N/A
Flash point	100 F
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. Minimize contact with material.
Unusual fire and explosion hazards	Closed containers may explode when exposed to extreme heat. Solvent vapors may be heavier than air. Under conditions of stagnant air, vapors may build up and travel along the ground to an ignition source which can result in flashback to the source of the vapors. Toxic vapors could be evolved from the combustion of this material.

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 such as vapor cartridge or air supplied respirator when necessary. Dike and absorb the material with absorbent such as clay and place in disposal containers.

7. Handling and Storage

Precautions to be taken in handling and storage: Store in a 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 components, therefore, read the MSDS of all components prior to using the material. Properly label all containers.

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.

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. Use a positive pressure respirator when airborne concentrations are not known or if exceeding TLVs or if working in a confined space. 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 3 for occupational exposure limit values

9. Physical and Chemical Properties

Appearance and Odor - Low viscosity liquid with ketone solvent odor

Boiling Point or Range - 279 to 375 F

Vapor Density (Air = 1) - N/A

Specific Gravity (H₂O = 1) - 1.2 typical (varies by color)

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

10. Stability and Reactivity

Stability - Stable.

Conditions to Avoid (Stability) - Avoid excessive heat or open flames. This material should not be mixed with phosphorus containing material or oxidizers.

Incompatibility (Material to Avoid) - Can react vigorously with strong oxidizing agents and phosphorous containing materials.

Hazardous Decomposition or By-Products - Carbon monoxide and carbon dioxide.

Hazardous Polymerization - Will not occur.

11. Toxicological Information

No data for the product itself.

Component data:

Component Propylene Glycol Monomethyl Ether Acetate CAS# 108-65-6: LD50 Oral (rat) 8,532 mg/kg. LD50 Dermal (rabbit) >5000 mg/kg. LC0 Inhalation 6 hr (rat = 4345 ppm. Eye irritation, slightly Irritating. Dermal: non-sensitizer (guinea pig, maximization test). Repeated Dose Toxicity: 14 days, inhalation – NOAEL: 300 ppm, LOAEL: 1000 ppm (rat. Mutagenicity in vitro: Ames – negative (salmonella typhimurium, metabolic activation; with/without) Developmental Toxicity/Teratogenicity: Rat, female, inhalation, 6 hrs/day 7 days a week; NOAEL (teratogenicity) . 4000 ppm – No Teratogenic effects observed at doses tested.

Component CAS# 9038-95-3: Acute oral toxicity LD50 = 5370 mg/kg (rat); Acute dermal toxicity LD50 = 21000 mg/kg (rabbit); Acute inhalation toxicity LC50 = 4670 ppm (rat); Skin irritation – slight irritation (rabbit); Eye irritation – mild irritation (rabbit)

Component CAS# 108-83-6: Acute oral toxicity LD50 = 5800 mg/kg (rat); Acute dermal toxicity LD50 = 16000 mg/kg (rabbit); Acute inhalation toxicity LC50 = 2000 ppm (rat); Skin irritation – slight irritation (rabbit); Eye irritation – mild eye irritation (rabbit)

Component Xylene: Inhalation LC50 26800ppm, Skin LD50 2000 mg/kg, Ingestion LD50 4.3 g/kg. Exposure may affect 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. Xylene may contain ethyl benzene. Ethyl benzene has shown limited evidence of a carcinogenic effect.

Component Dibutyltin Dilaurate 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 SUCH 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.

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Component Cellulose Acetate Butyrate Ester CAS# 9004-36-8: Oral LD-50: (Rat): > 3,200 mg/kg (highest dose tested). Dermal LD-50: (Guinea Pig): > 1,000 mg/kg (highest dose tested). Skin Corrosion: (Guinea Pig, 24 h): slight. Skin sensitization: not a sensitizer.

Component CAS# 110-43-0: Oral LD 50 (rat): 1600 mg/kg; Oral LD50 (mouse) 730 mg/kg; Inhalation LC50 (rat) 2000-4000 ppm, 4 hr. Dermal LD50 (rabbit) 10206 mg/kg; Dermal LD50 (guinea pig) >16200 mg/kg; Skin irritation (Rabbit) – slight to moderate; Eye irritation (rabbit) slight; Skin sensitization (human) none

Component 763-69-9: Acute oral toxicity LD50 = 5000 mg/kg (rat); acute dermal toxicity LD50 = 10000 mg/kg (rabbit). Component is a skin irritant.

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

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

12. Ecological Information

No data for the product itself.

Component data:

Component Propylene Glycol Monomethyl Ether Acetate CAS# 108-65-6: Biodegradation: aerobic, 100%, exposure time: 8 days. Acute and Prolonged Toxicity to fish LC50: 161 mg/l (fathead minnow), 96 hr. Acute Toxicity to Aquatic Invertebrates: EC50: 408 mg/l (water flea), 48 hr.

Component Xylene: Acute Toxicity: Fish: Toxic 1 < LCECIC50 < 10 mg/l, Aquatic Invertebrates: Toxic 1 < LC/EC/IC50 < 10 mg/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 CAS# 110-43-0: BOD-5: 1770 mg/kg; BOD-20: 2000 mg/kg; COD: 2420 mg/kg. Acute Aquatic Effects: 96 hr LC50 (fathead minnow) 131 mg/l and 48 hr EC50 (daphnia) > 90 mg/l (highest concentration tested)

Component 763-69-9: Possibly hazardous short term degradation products are not likely, however long term degradation products may arise. The product itself and its products of degradation are not toxic.

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

13. Waste Disposal

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Waste Disposal Method: Dispose of material in a waste disposal site in accordance with local, state, and federal law. 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.

14. Transport Information

DOT: UN1993, FLAMMABLE LIQUID N.O.S. (CONTAINS XYLENE, ETHYL BENZENE), 3, PG III

IMO/IMDG: UN1993, FLAMMABLE LIQUID N.O.S. (CONTAINS XYLENE, ETHYL BENZENE), 3, PG III

15. Regulatory Information

No data for the product itself.

Component data:

Component Saturated Polyester Polyol (non-hazardous): Europe Inventory: Component is listed or exempted. Canada Inventory: Component is listed or exempted. Canadian NPRI not required. United States Inventory: Component is listed (TSCA 8b) or exempted.

Component Propylene Glycol Monomethyl Ether Acetate CAS# 108-65-6: Listed on TSCA and DSL Component listed on the Pennsylvania, New Jersey and Massachusetts Right to know lists.

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.

Component CAS# 108-83-6: Pennsylvania, Massachusetts and New Jersey Right to Know, (On TSCA, DSL lists)

Component CAS# 9038-95-3 Pennsylvania and New Jersey Right to know (On TSCA, DSL Lists)

Component Xylene: Xylene contains EPCRA section 313 chemicals subject to the reporting requirements of the emergency planning and community right to know act of 1968. (Maximum wt % for components of xylene are: M-Xylene CAS# 108-38-3 is 46%, P-Xylene CAS# 106-42-3 is 20%, Ethylbenzene CAS# 100-41-4 is 19%, O-Xylene CAS# 95-47-6 is 16%..

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, Philippines inventory lists and on the Massachusetts, New Jersey, Pennsylvania right to know lists Ethyl Benzene a component of xylene has been designated by IARC as a possible carcinogen to humans based on increased tumor incidence in laboratory animals. risk phrases R10 Flammable R20/21 Harmful by inhalation and in contact with skin, R38 irritating to skin, S25 Avoid contact with eyes.

Component Dibutyltin Dilaurate CAS# 77-58-7: Sara Title III Information: TOXIC SUBSTANCES CONTROL ACT (TSCA): ALL COMPONENTS ARE INCL IN EPA TOXIC SUBSTANCES CONTROL ACT (TSCA) CHEM SUBSTANCE INVENTORY. OSHA

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HAZARD COMMUNICATION STD (29CFR1910.1200) HAZARD CLASS(ES):
IRRITANT.KIDNEY TOXIN. EPA SARA TITLE III SECTION 312 (40CFR370) HAZARD
CLASS. IMMEDIATE HEALTH HAZARD. EPA SARA TITLE III 313 (40CFR372) TOXIC
CHEMICALS "DE MINIMIS" LEVEL ARE NONE. Federal Regulatory Information:
CANADA DSL-INCLUDED 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 SAFETY PHRASES-IN CASE OF CONTACT
WITH EYES, RINSE IMMEDIATE WITH PLENTY OF WATER & SEEK MEDICAL 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
AND TOXIC ENFORCEMENT ACT OF 1986"):NONE.

Component Cellulose Acetate Butyrate Ester CAS# 9004-36-8: WHMIS (Canada) Status:
noncontrolled, OSHA: nonhazardous, TSCA (US Toxic Substances Control Act): This product
is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.
DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act):
This product is listed on the DSL. Any impurities present in this product are exempt from listing.
AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial
Chemicals Notification and Assessment Scheme): This product is listed on AICS or otherwise
complies with NICNAS. MITI (Japanese Handbook of Existing and New Chemical Substances):
This product is listed in the Handbook or has been approved in Japan by new substance
notification. ECL (Korean Toxic Substances Control Act): This product is listed on the Korean
inventory or otherwise complies with the Korean Toxic Substances Control Act. Philippines
Inventory (PICCS) : This product is listed on the Philippine Inventory or otherwise complies
with PICCS. Inventory of Existing Chemical Substances in China: All components are listed on
the Inventory of Existing Chemical Substances in China (IECSC) or are covered under a
polymer exemption.

Component CAS# 110-43-0: On DSL and TSCA, EINECS, AICS, MITI and ECL lists.

Component 763-69-9: is on the TSCA EINECS and DSL Lists

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

Component Polyester Polyol NJTSRN 0001C: All components of this product are on the Canada
DSL list and TSCA list.

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 in 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

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Component Acrylic polymers: Listed on TSCA and DSL.
Component Barium Sulfate: : Listed on TSCA and DSL.
Component C.I. Pigment violet 19 CAS# 1047-16-1: Listed on TSCA and DSL.
Component zinc salt of alkyl naphthalene sulfonic acid: Listed on TSCA and DSL.
Component solvent naphtha CAS# 64742-88-7: Listed on TSCA and DSL.
Component polyamine polyester polymer (non hazardous): Listed on TSCA and DSL.
Component C.I. Pigment blue 15 CAS# 147-14-8: Listed on TSCA and DSL.
Component C.I. Pigment blue CAS# 25869-00-5: Listed on TSCA and DSL.
Component CAS# 164741-65-7: Listed on TSCA and DSL.
Component C.I. Pigment green 17 CAS# 1308-38-9: Listed on TSCA and DSL.
Component Alkyl polyether phosphate ester-trade secret: Listed on TSCA and DSL
Component C.I. Pigment green CAS# 1328-53-6: Listed on TSCA and DSL.
Component C.I. Pigment green 36 CAS# 14302-13-7: : Listed on TSCA and DSL.
Component CAS# 4531-49-1: Listed on TSCA and DSL
Component CAS# 5567-15-7: Listed on TSCA and DSL. Listed on the Pennsylvania, New Jersey right to know lists
Component C.I. Pigment yellow 42 CAS# 51274-00-1 Listed on TSCA and DSL.
Component CAS# 15793-73-4: Listed on TSCA and DSL. Listed on the Pennsylvania, New Jersey right to know lists
Component C.I. Pigment red 101 CAS# 1309-37-1: Listed on TSCA and DSL.
Component C.I. Pigment red 3 CAS# 2425-85-6: Listed on TSCA and DSL.
Component aluminum silicate dihydrate CAS# 1332-58-7: Listed on TSCA and DSL.
Component mineral spirits CAS# 8052-41-3: Listed on TSCA and DSL.
Component C.I. Pigment red 187 CAS# 59487-23-9: Listed on TSCA and DSL.

16. Other Information

DISCLAIMER: THE INFORMATION 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

1. Product and Company Identification

Product Name High Performance Urethane (Colors)
Product Codes High Performance Urethane (Colors)

Manufacturer Concrete Floor Solutions, Inc.
Street Address 6801 Tilghman Street #113
City, State, Zip Allentown, PA 18106

Information Phone 610-366-0208
Emergency Phone Chemtrec 800-424-9300

Prepared By Jason Kehnel
Date Revised 5/1/2023

Chemical Name or Class Isocyanate/Solvent Mixture

2. Hazards Identification

GHS Classification: Flammable liquid category 3, specific target organ toxicity - single exposure category 3, specific target organ toxicity repeated exposure category 2, respiratory sensitization category 1B, skin corrosion/irritation category 2, skin sensitizer category 1B, serious eye irritation category 2B, acute toxicity inhalation category 4, acute hazard to aquatic environment category 3, 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 respiratory irritation

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

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

Warning: Causes skin irritation

Warning: May cause an allergic skin reaction

Warning: Causes serious eye irritation

Warning: Harmful if inhaled

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

Precautionary statements:

P102 Keep out of reach of children.

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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.

P271 Use only outdoors or in a well-ventilated area.

P260 Do not breathe dust/fume/gas/mist/vapors/spray

P284 Wear respiratory protection

P264 Wash hands thoroughly after handling.

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

P280 Wear protective gloves and clothing to prevent skin contact.

P273 Avoid release to the environment.

Response

P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P370 + P378 In case of fire: Use Foam, alcohol foam, CO₂, dry chemical for extinction.

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

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

P314 Get medical advice/attention if you feel unwell

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

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

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.

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

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.

Storage:

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

P405 Store locked up.

P233 Keep container tightly closed.

Disposal:

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

HMIS Hazard Classification

Health: 2 Flammability: 3 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.

Skin: May cause irritation, defatting, or 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, and diarrhea. Aspiration of the material into the lungs can cause chemical pneumonitis which can be fatal. Can cause corrosive action to mucous membranes and digestive tract.

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

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. Chronic Inhalation: as a result of previous repeated overexposures or a single large dose, 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. Cured material is difficult to remove. Chronic Skin contact: Prolonged contact with the isocyanate can cause reddening, swelling, rash, scaling, or blistering. In those who have developed 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: Yes

Additional carcinogenicity information:

May contain Ethyl Benzene as a component of Xylene. (IARC 2B)

3. Composition/Information on Ingredients

Ingredient	Cas No.	OSHA PEL	ACGIH TLV	OSHA STEL	Weight %
Homopolymer of HDI	28182-81-2	1 mg/m3	NONE	NONE	60-100
*Xylene	1330-20-7	100 PPM	100 PPM	150 PPM	12
*Ethyl Benzene (as a component of Xylene)	100-41-4	100 PPM	100 PPM	125 PPM	<2%
n-Butyl Acetate	123-86-4	150 PPM	150 PPM	200 PPM	7-13
*Hexamethylene Diisocyanate (HDI)	822-06-0	NONE	.005 PPM	NONE	<1%

Section 3 Notes: *Indicates toxic chemical(s) subject to the reporting requirements of section 313 Title III and of 40 CFR 372.* Xylene ACGIH STEL = 150 PPM.

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

4. First Aid Measures

Eyes: Flush eyes with water for at least 15 minutes and consult a physician.

Skin: For extreme exposure use a safety shower immediately. Wash affected areas 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 and administer oxygen if necessary. Obtain medical assistance, asthmatic type symptoms may occur immediately or be delayed for several hours. Treatment is symptomatic.

5. Fire Fighting Measures

Flammable limits in air
(% by volume)

Upper: N/A
Lower: N/A

Flash point

91 F

Method used

Seta Flash

Extinguishing media

Foam, Alcohol Foam, CO2, Dry Chemical

Special fire fighting procedures

Do not enter confined fire area without full bunker gear

including a positive pressure NIOSH approved self-contained breathing apparatus. Presence of solvents in the product may require grounding. Remove all sources of ignition.

Unusual fire and explosion hazards If fire occurs, solvents may produce excessive pressure. Sealed drums may rupture and ignite. Vapors are heavier than air and may travel along the ground and ignite by any source of ignition. During a fire, HDI vapors and other toxic gasses may be evolved. Containers may burst if contaminated with water. Vapor flashback to source is possible.

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.

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 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.

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 TLVs or if HDI Monomer concentrations exceed acceptable limits or when spraying material.

Ventilation: Exhaust ventilation sufficient to keep the airborne concentrations of HDI below their TLV and MGL maximum. Refer to Patty's Industrial Hygiene and Technology - Volume 1 (Third Edition) Chapter 17 and Volume III (First 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 3 for occupational exposure limit values

9. Physical and Chemical Properties

Appearance and Odor - Pale yellow liquids with solvent odor

Boiling Point or Range - 279 F

Vapor Density (Air = 1) - N/A

Specific Gravity (H₂O = 1) - 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

10. Stability and Reactivity

Stability - Stable.

Conditions to Avoid (Stability) - Avoid excessive heat or open flames, as well as all sources of ignition such as sparks, heaters, static discharge, 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 and 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.

11. Toxicological Information

High Performance Urethane (Colors) / SDS Revision Date: 5/1/2023

Product: Acute Oral Toxicity LD50 >5000 mg/kg (rat) (estimated value)
Acute Inhalation Toxicity LC50 390-453 mg/m³, 4h (rat)
Acute Dermal Toxicity LD50 >5000 mg/kg (rabbit)
Skin Irritation, rabbit, Draize, slightly irritating
Eye Irritation, rabbit, Draize, slightly irritating
Sensitization: Dermal – Sensitizer (Guinea Pig, Maximization Test). Dermal – Non-Sensitizer (Guinea Pig, Buehler).
Sensitization Inhalation – Non-sensitizer (Guinea Pig)
Repeated Dose Toxicity: 3 wks, inhalation NOAEL: 3.7-4.3 mg/m³ (rat)
Repeated Dose Toxicity: 90 d, inhalation NOAEL: 3.3-3.4 mg/m³ (rat)
Repeated Dose toxicity: Irritation to lungs and nasal cavity
Mutagenicity: Genetic Toxicity in Vitro, Ames: negative (salmonella typhimurium, metabolic Activation: with,without)
COMPONENT n-Butyl Acetate: Acute oral LD50 > 5000 mg/kg (rat), Acute Inhalation Toxicity: LC50 > 23.4 mg/l, 4hh (rat), Acute Dermal Toxicity LD50 > 5000 mg/kg (rabbit), Skin Irritation Guinea pig Acute Dermal Irritation exposure time 24h – Non-irritating, Skin Irritation Human patch test exposure time 48h – Non-irritating, Eye Irritation rabbit Draize exposure time 24h – slightly irritating, Sensitization dermal – non-sensitizing (guinea pig, human – maximization test). Repeated Dose Toxicity – 13 weeks inhalation NOAEL: 500 ppm (rat).
Mutagenicity Genetic Toxicity in Vitro: Ames negative (Salmonella typhimurium, Metabolic Activation: with/without).
COMPONENT Xylene: Inhalation LC50 26800ppm, Skin LD50 2000 mg/kg, Ingestion LD50 4.3 g/kg. Exposure may affect 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. Xylene may contain ethyl benzene.. Ethyl benzene has shown limited evidence of a carcinogenic effect.
COMPONENT Ethyl Benzene: 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). Carcinogenicity: Ethyl benzene was tested by inhalation exposure in mice and rats. In 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 mortality 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): 100

ppm NOAEL (F2): 100 ppm. Developmental Toxicity/Teratogenicity rat, female, inhalation, gestation, daily, NOAEL (teratogenicity): 100 ppm (maternal): 100 ppm. Teratogenic 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.

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).

COMPONENT n-Butyl Acetate: Biodegradation: aerobic, 98%, exposure time 28 days. Biochemical oxygen demand (BOD) 1020 mg/g. Chemical Oxygen demand (COD) 2,320 mg/g. Bioaccumulation: ca. 4-14 BCF. Acute and Prolonged Toxicity to Fish LC₅₀: 18 mg/l (fathead Minnow, 96 h). Acute Toxicity to Aquatic Invertebrate EC₅₀: 72.8 mg/l (water flea, 48 h). Toxicity to aquatic plants EC₅₀: 670 mg/l, end point: growth (Cryptomonad, 48 h). Toxicity to Microorganisms EC₅₀: 959 mg/l (Pseudomonas putida, 48 h).

COMPONENT Xylene: Acute Toxicity: Fish: Toxic 1 < LCECIC₅₀ < 10 mg/l, Aquatic Invertebrates: Toxic 1 < LC/EC/IC₅₀ < 10 mg/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 Ethyl Benzene: 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).

13. Waste Disposal

Waste Disposal Method: Dispose of material in a waste disposal site in accordance with local, state, and federal laws.

14. Transport Information

DOT: UN1993, FLAMMABLE LIQUID N.O.S. (CONTAINS XYLENE, BUTYL ACETATE), 3, PG III

IMO/IMDG: UN1993, FLAMMABLE LIQUID N.O.S. (CONTAINS XYLENE, BUTYL ACETATE), 3, PG III

15. Regulatory Information

High Performance Urethane (Colors) / SDS Revision Date: 5/1/2023

Product: OSHA HAZCOM STANDARD RATING: Hazardous. All components on TSCA Massachusetts, New York, Pennsylvania Right to Know list includes the following components: Homopolymer of HDI CAS# 28182-81-2 @ 60-100%; n-Butyl Acetate CAS# 123-86-4 @ 10-20%; Xylene CAS# 1330-20-7 @ 7-13%; Ethylbenzene CAS# 100-41-4 @ 1-5%.

Massachusetts, New York, Pennsylvania Special Hazardous Substance includes the following components: n-Butyl Acetate CAS# 123-86-4 @ 10-20%; Xylene CAS# 1330-20-7 @ 7-13%; Ethylbenzene CAS# 100-41-4 @ 1-5%; hexamethylene diisocyanate (HDI) CAS# 822-06-0 @ <0.6%.

California Prop 65: This product contains chemicals known to the State of California to be carcinogenic: Ethylbenzene CAS# 100-41-4 @ 1-5%.

US EPA CERCLA Hazardous Substances (40 CFR 302): n-butyl acetate reportable quantity 5000 lbs

US EPA CERCLA Hazardous Substances (40 CFR 302): Xylene reportable quantity 100 lbs.

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, Xylene and Ethylbenzene.

16. Other Information

DISCLAIMER: THE INFORMATION 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

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