GHS Safety Data Sheet

MUDSHIELD 45 PART A

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier:	MUDSHIELD 45 Part A
Common Name:	Polyester Polyol Mixture
SDS Number:	I170
Revision Date:	8/31/2020
Version:	1
Chemical Family:	Polyester Polyol
Product Description:	Two Component Polyurethane Coating
Supplier Details:	Blendhouse, LLC. 105 W Dewey Avenue Building E, Unit 5 Wharton NJ 07885
Phone:	833-253-6348
Email:	info@blendhouse.com
Internet:	www.blendhouse.com
Emergency:	Infotrac

2 HAZARDS IDENTIFICATION

Classification of Substance

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Health, Serious Eye Damage/Eye Irritation, 1
Physical, Flammable Liquids, 3
Health, Carcinogenicity, 2

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: DANGER

GHS Hazard Pictograms:

GHS Hazard Statements:

H318 - Causes serious eye damage
H226 - Flammable liquid and vapor
H351 - Suspected of causing cancer

GHS Precautionary Statements:

P201 - Obtain special instructions before use.
P241 - Use explosion-proof electrical/ventilating/light/equipment.
P243 - Take precautionary measures against static discharge.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308+313 - IF exposed or concerned: Get medical advice/attention.
P501 - Dispose of contents/container in accordance with existing federasl, state and local environmental control laws.

3 COMPOSITION/INFORMATION ON INGREDIENTS

CAS#	%	Chemical Ingredients: Chemical Name:
0	50-60%	Polyester Polyol
108-65-6	22-26%	2-Propanol, 1-methoxy-, acetate
763-69-9	10-20%	Propanoic acid, 3-ethoxy-, ethyl ester
1330-20-7	0.5-3.5%	Xylene (mixed isomers)
100-41-4	0.5-3.5%	Ethyl benzene

4 FIRST AID MEASURES

Inhalation: If inhaled, remove to fresh air. Give oxygen or artificail respiration if needed. Get medical attention.

Skin Contact: Remove contaminated clothing and footwear immediately, and wash before reuse. Discard clothing and footwear which cannot be decontaminated.

Wash with soap and water. Get medical attention if irritation develops and persists.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation.
Get medical attention.

Ingestion: If ingested, do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

5 FIRE FIGHTING MEASURES

Flash Point: 108 F. (42.2 C)
Flash Point Method: Tag Closed Cup
Lower Explosive Limit: PMA 1.3% ; EEP 1.05% ; Xylene 1.0%
Upper Explosive Limit: PMA 13.1% ; EEP Not Determined ; Xylene 7.0%

Special Fire Fighting Procedures:
Full emergency equipment with self contained breathing apparatus and full protective clothing should be worn by fire fighters. During a fire, irritating and/or toxic gases and smoke (see reactivity data) may be present from decomposition/combustion. Isolate from heat, electrical equipment, sparks and open flame. Closed container may explode when exposed to extreme heat. Use cold water to cool fire exposed containers to minimize risk of rupture. Solvent vapors may be heavier than air. Stagnant air may cause vapors to accumulate and travel along the ground to an ignition source which may result in a flash back to the source of the vapors.

Extinguishing Media: Dry chemical; carbon dioxide; foam; water spray for large fires.

6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures:
Evacuate nonessential personnel. Remove all sources of ignition and ventilate the area.
Equip clean up crew with appropriate protective equipment (see employee protection recommendations). Soak up in absorbent material such as sand, vermiculite, fuller's earth, and collect material in suitable containers.
Waste Disposal Method:
Waste may be incinerated or disposed of in accordance with federal, state, and local environmental control regulations. Empty containers must be handled with care due to product residue and combustible solvent vapor. Do not heat or cut empty container with electric or gas torch.

7 HANDLING AND STORAGE

Handling Precautions:

Handling precautions:
Material is combustible - keep away from heat, sparks and open flame. Take precautions against the buildup of electrostatic charges. Store in tightly closed containers to prevent moisture contamination. Practice caution and good personal cleanliness to avoid contact with skin and eyes. Avoid breathing vapors.
Note: Two component system- the cautions and hazards of both components apply to combined product when mixed.

Storage Requirements:

Storage Temperature (min/max) : 32° F. (0 C)/122° F. (50 C)
Shelf Life: Two years, if unopened.
Special sensitivity:
Material is hygroscopic and may absorb small amount of atmospheric moisture. Containers should be tightly closed to prevent contamination with foreign materials and moisture.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Exhaust ventilation sufficient to keep the airborne concentrations of the solvents in the workplace below their respective TLVs.
Respirator that is recommended or approved for use in organic vapor containing environments (air purifying or fresh air supplied) may be necessary. In spray applications an organic vapor/particulate respirator or air supplied air unit is necessary. The use of a positive pressure supplied air respirator is mandatory when; airborne concentrations are not known; when levels are 10 times the appropriate TLV; or if spraying is performed in a confined space or area with limited ventilation. Take into account other materials being used concurrently, the type of application and environmental concentrations when selecting a respirator. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Personal Protective Equipment:

Personal protective equipment

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: > 480 min Material tested:Butoject (KCL 897 / Aldrich Z677647, Size M) Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 79 min Material tested:Camatril (KCL 730 / Aldrich Z677442, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection: impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

2-Propanol, 1-methoxy-, acetate (108-65-6) [24.3%]

TWA 50 ppm USA. Workplace Environmental Exposure Levels (WEEL)

Propanoic acid, 3-ethoxy-, ethyl ester (763-69-9) [14.3%] : no data available

Xylene (mixed isomers) (1330-20-7) [3.5%]

TWA 100 ppm USA. Occupational Exposure Limits (OSHA) - Table Z- 1
435 mg/m3 Limits for Air Contaminants

TWA 100 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants -
435 mg/m3 1910.1000

STEL 150 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants -
655 mg/m3 1910.1000

TWA 100 ppm USA. ACGIH Threshold Limit Values (TLV)
434 mg/m3
Not classifiable as a human carcinogen

STEL 150 ppm USA. ACGIH Threshold Limit Values (TLV)
651 mg/m3
Not classifiable as a human carcinogen

TWA 100 ppm USA. ACGIH Threshold Limit Values (TLV)
Eye & Upper Respiratory Tract irritation Central Nervous System impairment Substances for which there is a Biological Exposure Index or Indices (see BEI section) Not classifiable as a human carcinogen

STEL 150 ppm USA. ACGIH Threshold Limit Values (TLV)
Eye & Upper Respiratory Tract irritation Central Nervous System impairment Substances for which there is a Biological Exposure Index or Indices (see BEI section) Not classifiable as a human carcinogen

TWA 100 ppm USA. Occupational Exposure Limits (OSHA) - Table Z- 1
435 mg/m3 Limits for Air Contaminants
The value in mg/m3 is approximate.

TWA 100 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants -
435 mg/m3 1910.1000

STEL 150 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants -
655 mg/m3 1910.1000

Ethyl benzene (100-41-4) [3.5%]

TWA 100 ppm USA. ACGIH Threshold Limit Values (TLV)
Central Nervous System impairment Upper Respiratory Tract irritation Eye irritation Adopted values or notations enclosed are those for which changes are proposed in the NIC See Notice of Intended Changes (NIC) Substances for which there is a Biological Exposure Index or Indices (see BEI section) Confirmed animal carcinogen with unknown relevance to humans

STEL 125 ppm USA. ACGIH Threshold Limit Values (TLV)
Central Nervous System impairment Upper Respiratory Tract irritation Eye irritation Adopted values or notations enclosed are those for which changes are proposed in the NIC See Notice of Intended Changes (NIC) Substances for which there is a Biological Exposure Index or Indices (see BEI section) Confirmed animal carcinogen with unknown relevance to humans

TWA 100 ppm USA. NIOSH Recommended Exposure Limits
435 mg/m3

ST	125 ppm 545 mg/m3	USA. NIOSH Recommended Exposure Limits
TWA	100 ppm 435 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z- 1 Limits for Air Contaminants

The value in mg/m3 is approximate.

TWA	100 ppm 435 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
STEL	125 ppm 545 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear
Physical State:	Liquid
Odor:	solvent odor
Solubility:	Resin-Insoluble; PMA-5.9%; EEP-2.9%; Xylene-Negligible
Specific Gravity or Density:	1.1
Percent Volatile:	By Volume: 35%
Flash Point:	108 F. (42.2 C) TCC.
Vapor Pressure:	PMA : 3.7 mm Hg. @ 20° C; EEP : 1.1 mm Hg. @ 25° C; Xylene : 9 mm Hg. @ 20° C.
Volatile organic compound:	Part A: 481g/l ; When mixed with PartB: 331g/l

10 STABILITY AND REACTIVITY

Chemical Stability:	Product is stable under normal conditions.
Conditions to Avoidentification:	Heat, flames and sparks
Materials to Avoidentification:	Oxidizing agents, Reducing agents, Peroxides, Phosphorus compounds
Hazardous Decomposition:	By Fire and Thermal Decomposition: Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke., Other undetermined compounds
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION

2-Propanol, 1-methoxy-, acetate (108-65-6) [24.3%]

Information on toxicological effects

Acute toxicity:
Oral LD50: (Rat) 6,190mg/kg
Inhalation LC50: (Rat, 6hr) >4345ppm
Dermal LD50: (Rabbit) > 5,000 mg/kg

Other information on acute toxicity:
Skin corrosion/irritation: (Rabbit, 24hr) No skin irritation
Serious eye damage/eye irritation: (Rabbit) Very Slight
Respiratory or skin sensitisation: Maximisation Test - guinea pig - Did not cause sensitisation on laboratory animals.
Germ cell mutagenicity: no data available

Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available
Teratogenicity: Specific target organ toxicity - single exposure (Globally Harmonized System): no data available
Specific target organ toxicity - repeated exposure (Globally Harmonized System): no data available
Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects: no data available

Additional Information:
RTECS: AI8925000

Propanoic acid, 3-ethoxy-, ethyl ester (763-69-9) [14.3%]

Information on toxicological effects

Acute toxicity:
Oral LD50: (Rat male) > 5,000 mg/kg
Oral LD50: (Rat female) 4,309 mg/kg
Inhalation LC50: (Rat male 6h) > 998 ppm (highest concentration tested)
Dermal LD50: (Rabbit male) 4,080 mg/kg
LD50 Dermal: (Rabbit female) 4,680 mg/kg

Other information on acute toxicity:
Skin corrosion/irritation: (Rabbit) No skin irritation - 4 h - OECD Test Guideline 404
Serious eye damage/eye irritation: (Rabbit) No eye irritation - 24 h - OECD Test Guideline 405
Respiratory or skin sensitisation: guinea pig - Does not cause skin sensitisation. - OECD Test Guideline 406
Germ cell mutagenicity: Genotoxicity in vitro - S. typhimurium - with and without metabolic activation - negative

Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available
Teratogenicity: no data available
Specific target organ toxicity - single exposure (Globally Harmonized System): no data available
Specific target organ toxicity - repeated exposure (Globally Harmonized System): no data available
Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Signs and Symptoms of Exposure: Nausea, Headache, Vomiting, Central nervous system depression, Dizziness

Synergistic effects: no data available

Additional Information:
Repeated dose toxicity - rat - male and female - Oral - No observed adverse effect level - 1,000 mg/kg RTECS: UF3325000

Xylene (mixed isomers) (1330-20-7) [3.5%]

Information on toxicological effects

Acute toxicity:
Oral LD50: (Rat) 4300 mg/kg
Inhalation LC50: (Rat, male, 4hr) 29.091mg/l (EU method B.2)
Dermal LD50: (Rabbit, male) >4400mg/kg

Other information on acute toxicity
Skin corrosion/irritation: (Rabbit, 24hr) irritating
Serious eye damage/eye irritation: Causes eye irritation
Respiratory or skin sensitization: no data available

Germ cell mutagenicity: Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Carcinogenicity:
IARC: 2B - Group 2B: Possibly carcinogenic to humans (Ethylbenzene)
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Xylene)
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Two-generation study, Inhalative, daily, (rat, male/female) NOAEL (parental): 500, NOAEL (F1): > 500, NOAEL (F2): > 500 No toxicity to reproduction

Teratogenicity: rat, female, inhalation, gestation days 9-14, 24 hrs/day, NOAEL (teratogenicity): > 230 ppm, NOAEL (maternal): > 230 ppm No Teratogenic effects observed at doses tested.rat, female, inhalation, gestation days 6-20, 6 hours/day, NOAEL (teratogenicity): > 8.684 mg/l, NOAEL (maternal): 2.171 mg/l, No Teratogenic effects observed at doses tested.

Specific target organ toxicity - single exposure (Globally Harmonized System): no data available
Specific target organ toxicity - repeated exposure (Globally Harmonized System): no data available
Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. Causes respiratory tract irritation. Ingestion May be harmful if swallowed. Skin Causes skin irritation. Eyes Causes eye irritation.

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects: no data available

Additional Information:

RTECS: Not available

Ethyl benzene (100-41-4) [3.5%]

Information on toxicological effects

Acute toxicity:
Oral LD50: (Rat) 3500mg/kg
Inhalation LC50: (Rat, 2 hr) 5500mg/m3
Dermal LD50 (Rabbit) 15,433 mg/kg

Other information on acute toxicity
Skin corrosion/irritation: Draize, mild skin irritation
Serious eye damage/eye irritation: (Rabbit) Draize, severely irritating
Respiratory or skin sensitisation: dermal: non-sensitizer (Human, Patch Test)

Germ cell mutagenicity: Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Carcinogenicity:
This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.
IARC: 2B - Group 2B: Possibly carcinogenic to humans (Ethylbenzene)
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available
Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System) :no data available
Specific target organ toxicity - repeated exposure (Globally Harmonized System): no data available
Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. Causes respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. Causes skin irritation. Eyes Causes eye irritation.

Signs and Symptoms of Exposure: Central nervous system depression, Nausea, Headache, Vomiting, Ataxia., Tremors

Synergistic effects: no data available

Additional Information:

RTECS: DA0700000

12 ECOLOGICAL INFORMATION

2-Propanol, 1-methoxy-, acetate (108-65-6) [24.3%]

Information on ecological effects

Toxicity:
Toxicity to fish mortality LC50 - Salmo gairdneri - 100 - 180 mg/l - 96 h. Method: OECD Test Guideline 203
Toxicity to daphnia Immobilization EC50 - Daphnia magna (Water flea) - > 500 mg/l - 48 h.
and other aquatic Method: Tested according to Annex V of Directive 67/548/EEC. invertebrates

Persistence and degradability: Biodegradability Biotic/Aerobic Result: 100 % - Readily biodegradable.

Bioaccumulative potential: no data available
Mobility in soil: no data available
PBT and vPvB assessment: no data available
Other adverse effects: Biochemical Oxygen 0.36 mg/l Demand (BOD)
Chemical Oxygen 1.74 mg/g Demand (COD)

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.

Propanoic acid, 3-ethoxy-, ethyl ester (763-69-9) [14.3%]

Information on ecological effects

Toxicity:
Toxicity to fish static test LC50 - Pimephales promelas (fathead minnow) - 55.3 mg/l - 96 h. Method: OECD Test Guideline 203
static test LC50 - Pimephales promelas (fathead minnow) - 45.3 mg/l - 96 h
Toxicity to daphnia and other aquatic invertabrates immobilization EC50 - Daphnia magna (Water flea) - > 479.7 mg/l - 48 h. Method: OECD Test Guideline 202 invertebrates
Toxicity to algae Growth inhibition EC50 - Selenastrum capricornutum (green algae) - > 114.86 mg/l - 72 h. Method: OECD Test Guideline 201
Toxicity to bacteria Growth inhibition IC50 - other microorganisms - > 5,000 mg/l - 16 h.
Persistence and degradability: no data available
Bioaccumulative potential: no data available
Mobility in soil: no data available
PBT and vPvB assessment: no data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

Xylene (mixed isomers) (1330-20-7) [3.5%]

Information on ecological effects

Toxicity:
LC50: 13.5 - 17.3 mg/l (Rainbow (Donaldson)Trout (Oncorhynchus mykiss), 96 h)

Acute Toxicity to Aquatic Invertebrates: 600 ug/L (Gammarus sp., 48 h)

Toxicity to Aquatic Plants: EC50: 10 mg/l, End Point: growth (other: algae, 72 h)

Persistence and degradability: > 60 %, Exposure time: 28 d, i.e. readily biodegradable

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life.

Ethyl benzene (100-41-4) [3.5%]

Information on ecological effects

Toxicity:
Toxicity to fish LC50 - Cyprinodon variegatus (sheepshead minnow) - 88.00 mg/l - 96 h.
LC50 - Lepomis macrochirus (Bluegill) - 80.00 mg/l - 96 h
NOEC - Cyprinodon variegatus (sheepshead minnow) - 88 mg/l - 96 h
LC50 - Oncorhynchus mykiss (rainbow trout) - 4.2 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 2.90 mg/l - 48 h.

Persistence and degradability: no data available
Bioaccumulative potential: no data available
Mobility in soil: no data available
PBT and vPvB assessment: no data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life.

13 DISPOSAL CONSIDERATIONS

Waste Disposal Method
Waste disposal should be in accordance with existing federal, state and local environmental control laws.

Empty Container Precautions
Do not heat or cut container with electric or gas torch. Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Label precautions also apply to this container when empty.

14 TRANSPORT INFORMATION

UN1263, Paint, 3
*If quantity is in a non bulk packaging (less than 119 gallons), this material ships as non regulated unless the combustible liquid is a hazardous substance or a hazardous waste.

IMO/IMDG
ICAO/IATA
Hazarrd Label: Flammable Liquid
Hazard Placard: Flammable Liquid

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

2-Propanol, 1-methoxy-, acetate (108-65-6) [24.3%] TSCA

Propanoic acid, 3-ethoxy-, ethyl ester (763-69-9) [14.3%] TSCA

RQ(100LBS), Xylene (mixed isomers) (1330-20-7) [3.5%] CERCLA, CSWHS, EPCRAWPC, HAP, MASS, NJHS, OSHAWAC, PA, SARA313, TOXICRCRA, TSCA, TXAIR, TXHWL

Ethyl benzene (100-41-4) [3.5%] CERCLA, CSWHS, EPCRAWPC, HAP, MASS, NJHS, OSHAWAC, PA, PRIPOL, SARA313, TOXICPOL, TSCA, TXAIR

WARNING This product can expose you to chemicals including Ethylbenzene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Regulatory CODE Descriptions

RQ = Reportable Quantity
TSCA = Toxic Substances Control Act
CERCLA = Superfund clean up substance
CSWHS = Clean Water Act Hazardous substances
EPCRAWPC = EPCRA Water Priority Chemicals
HAP = Hazardous Air Pollutants
MASS = MA Massachusetts Hazardous Substances List
NJHS = NJ Right-to-Know Hazardous Substances
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
SARA313 = SARA 313 Title III Toxic Chemicals
TOXICRCRA = RCRA Toxic Hazardous Wastes (U-List)
TXAIR = TX Air Contaminants with Health Effects Screening Level
TXHWL = TX Hazardous Waste List
PRIPOL = Clean Water Act Priority Pollutants
TOXICPOL = Clean Water Act Toxic Pollutants

16 OTHER INFORMATION

NOTICE: This information is presented in good faith and believed to be accurate as of the effective date below. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Blendhouse, LLC. assumes no responsibility for personal injury or property damage to vendees, users, or third parties caused by the material. Such vendees or users assume all risks associated with the use of the material. Regulatory requirements are subject to change and may differ from one location to another: it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The preceding specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

Revision Date: 8/31/2020

GHS Safety Data Sheet

MUDSHIELD 45 PART B

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier:	Mudshield 45 Part B
Common Name:	1,6 Hexamethylene Diisocyanate Based Polyisocyanate
SDS Number:	I171
Revision Date:	8/31/2020
Version:	1
Chemical Family:	Aliphatic Isocyanate
Product Use:	Curing agent Wearcoat Urethanes
Supplier Details:	Blendhouse, LLC. 105 W Dewey Avenue Building E, Unit 5 Wharton NJ 07885
Phone:	833-253-6348
Email:	info@blendhouse.com
Internet:	www.blendhouse.com
Emergency:	Infotrac

2 HAZARDS IDENTIFICATION

Classification of Substance

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Health, Respiratory or skin sensitization, 1 Skin
Health, Serious Eye Damage/Eye Irritation, 2 A
Health, Specific target organ toxicity - Single exposure, 3
Physical, Flammable Liquids, 3
Health, Acute toxicity, 4 Oral
Health, Acute toxicity, 4 Inhalation

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: WARNING

GHS Hazard Pictograms:

GHS Hazard Statements:

H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H226 - Flammable liquid and vapor
H302 - Harmful if swallowed
H332 - Harmful if inhaled
H335 - May cause respiratory irritation

GHS Precautionary Statements:

P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
P232 - Protect from moisture.
P241 - Use explosion-proof electrical/ventilating/light/equipment.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing should not be allowed out of the workplace.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302+352 - IF ON SKIN: Wash with soap and water.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P314 - Get Medical advice/attention if you feel unwell.
P333 - If skin irritation or a rash occurs: Get medical attention.
P363 - Wash contaminated clothing before reuse.
P403+233 - Store in a well ventilated place. Keep container tightly closed.
P501 - Dispose of contents/container in accordance with existing federal,state, and local environmental control laws.

3 COMPOSITION/INFORMATION ON INGREDIENTS

CAS#	Chemical Ingredients: %	Chemical Name:
28182-81-2	85-97%	Hexane, 1,6-diisocyanato-, homopolymer
822-06-0	0.1-1%	Hexamethylene-1,6-diisocyanate
763-69-9	3-15%	Propanoic acid, 3-ethoxy-, ethyl ester

4 FIRST AID MEASURES

Inhalation: Move to an area free from further exposure. Extreme asthmatic reactions that may occur in sensitized persons can be life threatening. Get immediate medical attention. Give oxygen or artificail respiration if needed. Asthmatic symptoms may develop and may be immediate or delayed up to several hours.

Skin Contact: Remove contaminated clothing and footwear immediately, and wash before reuse. Discard clothing and footwear which cannot be decontaminated.
Wash with soap and water. Get medical attention if irritation develops and persists.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation. Then remove contact lenses, if easily removeable, and continue irrigation for not less than 15 minutes. Get medical Attention if irritation develops.

Ingestion: Do NOT induce vomiting or attempt chemical neutralization. Rinse mouth with water. Never give anyting by mouth to an unconscious person. Get prompt, qualified medical attention.

Most Important Symptom(s)/Effect(s)

Acute: Isocyanate vapors or mist at concentrations above the exposure limits or guidelines can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) with symptoms of runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing difficulty). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the exposure limits or guidelines with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the exposure limits or guidelines may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g. fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

May cause skin irritation with symptoms of reddening, itching, and swelling. Can cause sensitization. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove.

May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor or aerosol may cause irritation with symptoms of burning and tearing.

May cause irritation of the digestive tract; Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

Delayed: Symptoms affecting the respiratory tract can also occur several hours after overexposure.

5 FIRE FIGHTING MEASURES

Flash Point: 136.0° F. (58.0° C.)
Flash Point Method: Setaflash
Special Fire Fighting Procedures:
Full emergency equipment with self contained breathing apparatus and full protective clothing should be worn by fire fighters. During a fire, HDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. (see Section VIII). Isolate from heat, electrical equipment, sparks and open flame. Closed container may explode when exposed to extreme heat or burst when contaminated with water (CO2 evolved). Solvent vapors may be heavier than air. Stagnant air may cause vapors to accumulate and travel along the ground to an ignition source which may result in a flash back to the source of the vapors.

Unusual Fire or Explosion Hazards: Closed container may forcibly rupture under extreme heat or when contents are contaminated with water (CO2 formed). Use cold-water spray to cool fire-exposed containers to minimize the risk of rupture. Large fires can be extinguished with large volumes of water applied from a safe distance, since reaction between water and hot diisocyanate can be vigorous.

Extinguishing Media: Dry chemical; carbon dioxide; foam; water spray for large fires.

6 ACCIDENTAL RELEASE MEASURES

Spill or leak procedures:
Evacuate nonessential personnel. Remove all sources of ignition and ventilate the area. Notify appropriate authorities if necessary. Put on appropriate personal protective equipment (see Section 8). Dike or impound spilled material and control further spillage if feasible. Cover the spill with absorbent material (e.g. sawdust, vermiculite, kitty littter, fullers earth or other absorbent material. Pour decontamination solution over spill area and allow to react for at least 10 minutes. Collect material in open containers and add further amounts of decontamination solution. Remove containers to a safe place, cover loosely, allow to stand for 24 to 48 hours. Wash down spill area with decontamination solutions.

Additional Spill Procedures/Neutralization

Products or product mixtures that have been shown to be effective neutralization solutions for decontaminating surfaces, tools, or equipment that have been in contact with an isocyanate includes:

Products available through industrial suppliers:

· Spartan Chemical Company: 1-800-537-8990:

- o Spartan® ShineLine Emulsifier Plus
- o Spartan® SC-200 Heavy Duty Cleaner

· Colorimetric Laboratories, Inc. (CLI): 1-847-803-3737

- o Isocyanate Decontamination Solution

· Mix equal amounts of the following:

- o Mineral spirits (80%), VM&P Naphtha (15%), and household detergent (5%), and
- o A 50-50 mixture of monoethanolamine and water

In a separate container, blend the two solutions in a 1:1 ratio by volume. Immediately prior to applying this blended neutralization solution onto the contaminated surface area, mix or agitate the container to help ensure uniform mixing of the ingredients.

If the above products are not available, the following products can be obtained through retail outlets:

· ZEP® Commercial Heavy-Duty Floor Stripper

· Greased Lightning® Super Strength Cleaner and Degreaser

· EASY OFF® Grill and Oven Cleaner or EASY OFF® Fume Free Oven Cleaner

· A mixture of 50% Simple Green® Pro HD Heavy-Duty Cleaner and 50% household ammonia

· A mixture of 90% Fantastic® Heavy Duty All Purpose Cleaner and 10% household ammonia.

Waste disposal method:
Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue and flammable solvent vapor. Decontaminate containers prior to disposal. Do not heat or cut empty container with electric or gas torch.

7 HANDLING AND STORAGE

Handling Precautions:

Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Consider normal working hygiene.
Do not expose containers to open flame, excessive heat, or direct sunlight.
Keep away from sources of ignition.
Keep material out of reach of children.
Wash clothing before reuse and decontaminate or discard contaminated shoes. Wash thoroughly after handling.

Storage Requirements:

Storage Temperature (min/max): 30° F. (-34° C)/122° F. (50° C)
Shelf Life: One year, if unopened
Special Sensitivity:
If container is exposed to high heat, it can be pressurized and possibly rupture explosively. HDI reacts slowly with water to form CO2 gas. This gas can cause sealed containers to expand and possibly rupture explosively.
Handling/Storage Precautions:
Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. At maximum storage temperatures noted, material may slowly polymerize without hazard. Ideal storage temperature range for ease of handling is 50-81° F. (10-27° C.). Avoid contact with skin and eyes. Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Industrial Hygiene/Ventilation Measures
Good industrial hygiene practice dictates that worker protection should be achieved through engineering controls, such as ventilation, whenever feasible. When such controls are not feasible to achieve full protection, the use of respirators and other personal protective equipment is mandated. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Curing ovens must be ventilated to prevent emissions into the workplace. If oven off-gases are not vented properly (i.e. they are released into the work area), it is possible to be exposed to airborne monomeric HDI.

Personal Protective Equipment:

Respiratory Protection
A respirator that is recommended or approved for use in isocyanate-containing environments (air-purifying or fresh air-supplied) may be necessary for spray applications or other situations such as high temperature use which may produce inhalation exposures. A supplied-air respirator (either positive pressure or continuous flow-type) is recommended. Before an air-purifying respirator can be used, air monitoring must be performed to measure airborne concentrations of HDI monomer and HDI polyisocyanate. Specific conditions under which air-purifying respirators can be used are outlined in the following sections. Observe OSHA regulations for respirator use (29 CFR 1910.134).

SPRAY APPLICATION: A. Good industrial hygiene practice dictates that when isocyanate-based coatings are spray applied, some form of respiratory protection should be worn. During the spray application of coatings containing this product the use of a supplied-air (either positive pressure or continuous flow-type) respirator is mandatory when ONE OR MORE of

the following conditions exists: -the airborne isocyanate concentrations are not known; or -the airborne isocyanate monomer concentrations exceed 0.05 ppm averaged over eight (8) hours (10 times the 8 hour TWA exposure limit); or -the airborne polyisocyanate (polymeric, oligomeric) concentrations exceed 5 mg/m3 averaged over 8 hours or 10 mg/m3 averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits); or - operations are performed in a confined space (See OSHA Confined Space Standard, 29 CFR 1910.146). A properly fitted air-purifying (combination organic vapor and particulate) respirator, proven by test to be effective in isocyanate-containing spray paint environments, and used in accordance with all recommendations made by the manufacturer, can be used when ALL of the following conditions are met: -The airborne isocyanate monomer concentrations are known to be below 0.05 ppm averaged over eight (8) hours (10 times 8 hour TWA exposure limit); and -the airborne polyisocyanate (polymeric, oligomeric) concentrations are known to be below 5 mg/m3 averaged over 8 hours or 10 mg/m3 averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits) and - a NIOSH-certified End of Service Life Indicator or a change schedule based upon objective information or data is used to ensure that cartridges are replaced before the end of their service life. In addition, prefilters should be changed whenever breathing resistance increases due to particulate buildup.

NON-SPRAY OPERATIONS: A. During non-spray operations such as mixing, batch-making, brush or roller application, etc., at elevated temperatures (for example, heating of material or application to a hot substrate), it is possible to be exposed to airborne isocyanate vapors. Therefore, when the coatings system will be applied in a non-spray manner, a supplied-air (either positive pressure or continuous flow-type) respirator is mandatory when ONE OR MORE of the following conditions exists: - the airborne isocyanate concentrations are not known; or - the airborne isocyanate monomer concentrations exceed 0.05 ppm averaged over eight (8) hours (10 times the 8 hour TWA exposure limit); or - the airborne polyisocyanate (polymeric, oligomeric) concentrations exceed 5 mg/m3 averaged over 8 hours or 10 mg/m3 averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits); or - operations are performed in a confined space (See OSHA Confined Space Standard, 29 CFR 1910.146). A properly fitted air-purifying (combination organic vapor and particulate) respirator, proven by test to be effective in isocyanate-containing paint environments, and used in accordance with all recommendations made by the manufacturer, can be used when ALL of the following conditions are met: -the airborne concentrations of the isocyanate monomer are below 0.05 ppm averaged over eight (8) hours (10 times the 8 hour TWA exposure limit); and - the airborne polyisocyanate (polymeric, oligomeric) concentrations are known to be below 5 mg/m3 averaged over eight (8) hours or 10 mg/m3 averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits) and - a NIOSH-certified End of Service Life Indicator or a change schedule based upon objective information or data is used to ensure that cartridges are replaced before the end of their service life. In addition, prefilters should be changed whenever breathing resistance increases due to particulate buildup.

Hexane, 1,6-diisocyanato-, homopolymer (28182-81-2) [85-97%] : no data available

Hexamethylene-1,6-diisocyanate (822-06-0) [0.1-1%]:

Components with workplace control parameters

TWA 0.0050 ppm USA. ACGIH Threshold Limit Values (TLV)
Upper Respiratory Tract irritation Respiratory sensitization

TWA 0.0050 ppm USA. NIOSH Recommended Exposure Limits
0.035 mg/m3
10 minute ceiling value

C 0.02 ppm USA. NIOSH Recommended Exposure Limits
0.14 mg/m3
10 minute ceiling value

Propanoic acid, 3-ethoxy-, ethyl ester (763-69-9) [3-15%] : no data available

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear to slightly yellow		
Physical State:	Liquid	**Odor:**	Solvent ester type odor
Specific Gravity or Density:	1.0 - 1.2 @ 68° F. (20° C.)	**Solubility:**	Resin is insoluble - reacts slowly with water to liberate CO2 gas
Molecular weight:	Approx. 500 (Polyisocyanate)	**Percent Volatile:**	By Volume: 4% to 14%

10 STABILITY AND REACTIVITY

Chemical Stability:	Product is stable under normal conditions.
Conditions to Avoldentification:	Heat, flames and sparks.
Materials to Avoldentification:	Water, Amines, Strong bases, Alcohols, Copper alloys
Hazardous Decomposition:	By Fire and High Heat: Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke., Hydrogen cyanide, Isocyanate, Isocyanic Acid, Other undetermined compounds
Hazardous Polymerization:	May occur; contact with moisture or other materials which react with isocyanates or temperatures over 350° F. (177° C) may cause polymerization.

11 TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:

Skin Contact, Inhalation, Eye Contact

Health Effects and Symptoms

Acute:

Isocyanate vapors or mist at concentrations above the exposure limits or guidelines can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) with symptoms of runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing difficulty). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the exposure limits or guidelines with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the exposure limits or guidelines may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g. fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

May cause skin irritation with symptoms of reddening, itching, and swelling. Can cause sensitization. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove.

May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor or aerosol may cause irritation with symptoms of burning and tearing.

May cause irritation of the digestive tract; Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

Chronic:

As a result of previous repeated overexposures or a single large dose, certain individuals may develop sensitization to isocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure to isocyanates at levels well below the exposure limits or guidelines. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Extreme asthmatic reactions can be life threatening. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist

for weeks and in severe cases for several years. Sensitization can be permanent.

Prolonged contact with skin can cause reddening, swelling, rash, and, in some cases, skin sensitization. Animal tests and other research indicate that skin contact with isocyanates can play a role in causing isocyanate sensitization and respiratory reaction. This data reinforces the need to prevent direct skin contact with isocyanates.

Prolonged vapor contact with the eyes may cause conjunctivitis.

Delayed: Symptoms affecting the respiratory tract can also occur several hours after overexposure.

Hexane, 1,6-diisocyanato-, homopolymer (28182-81-2) [85-97%]

Toxicity Note: Data is based on a similar product, including residual monomer.

Acute Oral Toxicity: LD50: > 5000 mg/kg (rat, female) (OECD Test Guideline 423)

Acute Inhalation Toxicity: LC50: 0.554 mg/l, 4 h (rat)

The test atmosphere generated in the animal study is not representative of workplace environments, how the substance is placed on the market, and how it can reasonably be expected to be used. Therefore the test result cannot be directly applied for the purpose of assessing hazard. Based on the weight of the evidence, a modified classification for acute inhalation toxicity is justified.

Skin Irritation: rabbit, slight irritant

Eye Irritation: rabbit, slight irritant

Sensitization: Skin sensitisation according to Magnusson/Kligmann (maximizing test):: positive (guinea pig, OECD Test Guideline 406)

Repeated Dose Toxicity:

Subchronic inhalation toxicity, rat:

Test concentration - 0,4 ; 3,4 and 21,0 mg aerosol/m³exposure time - 13 weeks(6 hours a day, 5 days a week)3,4 mg/m³ was tolerated without damage (NOEL),21,0 mg/m³ caused increase of lung weight.No evidence of histopathological changes in the upper and central respiratory passages.Unspecific changes in the lower respiratory tract; these are attributed to the product's primary irritation potential.Evidence of damage to organs other than the organs of respiration was not found.

Mutagenicity:

Genetic Toxicity in Vitro: Salmonella/microsome test (Ames test): No indication of mutagenic effects.

Genetic Toxicity in Vivo: Micronucleus test: negative (mouse)

Hexamethylene-1,6-Diisocyanate (822-06-0) [0.1-1.0%]

Acute Oral Toxicity: LD50: 746 mg/kg (rat, male) (OECD Test Guideline 401)

Acute Inhalation Toxicity: LC50: 0.124 mg/l, 4 h (rat, male/female) (OECD Test Guideline 403)

Acute Dermal Toxicity: LD50: > 7000 mg/kg (rat, male/female) (OECD Test Guideline 402)

Skin Irritation: rabbit, OECD Test Guideline 404, Corrosive

Eye Irritation: rabbit, OECD Test Guideline 405, Corrosive

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

Other isocyanates have been shown to produce dermal and respiratory sensitization in several species (guinea pigs, mice, rabbits, dogs). In addition, there is some evidence to suggest that cross-sensitization between different types of diisocyanates

may occur.

dermal: sensitizer (Human, Case Report)

Respiratory sensitization: sensitizer (guinea pig)

Repeated Dose Toxicity

2 years, inhalation: NOAEL: < 0.005 ppm, LOAEL: 0.005 ppm, (rat, Male/Female, 6 hrs/day 5 days/week). Irritation to lungs and nasal cavity.

Mutagenicity

Genetic Toxicity in Vitro: Salmonella/microsome test (Ames test): negative (Salmonella typhimurium, Metabolic Activation: with/without)

Point mutation in mammalian cells (HPRT test): negative (Metabolic Activation: with/without)

Genetic Toxicity in Vivo: Micronucleus test: negative (mouse, male/female, Inhalative)

Carcinogenicity

rat, male/female, Inhalative, 2 yrs, 6 hours/day, 5 days/week, Did not show carcinogenic effects in animal experiments.

Toxicity to Reproduction/Fertility Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test, Inhalative, 6 hours/day 7 days/week, (rat, male/female) NOAEL (F2): 0.3 ppm Fertility and developmental toxicity tests did not reveal any effect on reproduction.

Developmental Toxicity/Teratogenicity: Rat, female, inhalation, gestation days 0 - 19, daily, NOAEL (teratogenicity): >0.3 ppm, NOAEL (maternal): < 0.3 ppm No Teratogenic effects observed at doses tested.

No fetotoxicity observed at doses tested.

Neurological Effects

Rats exposed by inhalation, 6 hours/day, for approximately 3 weeks, to concentrations as high as 0.3 ppm showed no neurobehavioral effects or damage to nerve tissues.

Carcinogenicity:

No carcinogenic substances as defined by IARC, NTP and/or OSHA

Propanoic acid, 3-ethoxy-, ethyl ester (763-69-9) [3-15%]

Information on toxicological effects

Acute toxicity:
Oral LD50 LD50 Oral - rat - male - > 5,000 mg/kg
LD50 Oral - rat - female - 4,309 mg/kg
Inhalation LC50 LC50 Inhalation - rat - male - 6 h - > 998 ppm
Dermal LD50 LD50 Dermal - rabbit - male - 4,080 mg/kg
LD50 Dermal - rabbit - female - 4,680 mg/kg
Other information on acute toxicity no data available

Skin corrosion/irritation: Skin - rabbit - No skin irritation - 4 h - OECD Test Guideline 404

Serious eye damage/eye irritation: Eyes - rabbit - No eye irritation - 24 h - OECD Test Guideline 405

Respiratory or skin sensitisation: guinea pig - Does not cause skin sensitisation. - OECD Test Guideline 406

Germ cell mutagenicity: Genotoxicity in vitro - S. typhimurium - with and without metabolic activation - negative

Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human

carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):
no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Signs and Symptoms of Exposure: Nausea, Headache, Vomiting, Central nervous system depression, Dizziness

Synergistic effects: no data available

Additional Information:

Repeated dose toxicity - rat - male and female - Oral - No observed adverse effect level - 1,000 mg/kg RTECS: UF3325000

12 ECOLOGICAL INFORMATION

Hexane, 1,6-diisocyanato-, homopolymer (28182-81-2) [85-97%]

Biodegradation: 1 %, Exposure time: 28 d, i.e. not readily degradable

Acute and Prolonged Toxicity to Fish: LC50: > 100 mg/l (Danio rerio (zebra fish), 96 h)

Acute Toxicity to Aquatic Invertebrates: EC50: > 100 mg/l (Daphnia magna (Water flea), 48 h)

Toxicity to Aquatic Plants: ErC50: > 100 mg/l, (scenedesmus subspicatus, 72 h)

Toxicity to Microorganisms: EC50: > 100 mg/l, (activated sludge, 3 h)

Additional Ecotoxicological Remarks: Data is based on a similar product, including residual monomer.

Hexamethylene-1,6-Diisocyanate (822-06-0) [0.1-1.0%]

Biodegradation: aerobic, 42 %, Exposure time: 28 d, i.e. not readily degradable

Bioaccumulation: value calculated, 57.6 BCF

An accumulation in aquatic organisms is not to be expected. Value calculated, 3.2 BCF

An accumulation in aquatic organisms is not to be expected. Studies of hydrolysis products.

Acute and Prolonged Toxicity to Fish: LC0: >= 82.8 mg/l (Danio rerio (zebra fish), 96 h)

Acute Toxicity to Aquatic Invertebrates: EC0: >= 89.1 mg/l (Daphnia magna (Water flea), 48 h)

Toxicity to Aquatic Plants: ErC50: > 77.4 mg/l, (Desmodesmus subspicatus (Green algae), 72 h)

Toxicity to Microorganisms: EC50: 842 mg/l, (activated sludge, 3 h)

Propanoic acid, 3-ethoxy-, ethyl ester (763-69-9) [3-15%]

Toxicity:
Toxicity to fish static test LC50 - Pimephales promelas (fathead minnow) - 55.3 mg/l - 96 h.
Method: OECD Test Guideline 203
static test LC50 - Pimephales promelas (fathead minnow) - 45.3 mg/l - 96 h
Toxicity to daphnia Immobilization EC50 - Daphnia magna (Water flea) - > 479.7 mg/l - 48 h.
and other aquatic Method: OECD Test Guideline 202 invertebrates
Immobilization EC50 - Daphnia magna (Water flea) - 785 mg/l - 48 h
Toxicity to algae Growth inhibition EC50 - Selenastrum capricornutum (green algae) - > 114.86 mg/l - 72 h.
Method: OECD Test Guideline 201
Toxicity to bacteria Growth inhibition IC50 - other microorganisms - > 5,000 mg/l - 16 h.

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

13 DISPOSAL CONSIDERATIONS

Waste disposal method:
Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue and flammable solvent vapor. Decontaminate containers prior to disposal. Do not heat or cut empty container with electric or gas torch

14 TRANSPORT INFORMATION

UN1263, Paint, 3
If quantity is in a non bulk packaging (less than 119 gallons), this material ships as non regulated unless the combustible liquid is a hazardous substance of a hazardous waste.

IMO/IMDG
ICAO/IATA
Hazard Label~~~~~~~~~~~~~~~~~~~~Flammable Liquid
Hazard Placard~~~~~~~~~~~~~~~~~~~Flammable Liquid

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

Hexane, 1,6-diisocyanato-, homopolymer (28182-81-2) [85-97%] TSCA

RQ(100LBS), Hexamethylene-1,6-diisocyanate (822-06-0) [0.1-1%] CERCLA, HAP, MASS, SARA313, TSCA, TXAIR

Propanoic acid, 3-ethoxy-, ethyl ester (763-69-9) [3-15%] TSCA

This product does not contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

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Regulatory CODE Descriptions
-----------------------------------------------------------------
RQ = Reportable Quantity
TSCA = Toxic Substances Control Act
CERCLA = Superfund clean up substance
HAP = Hazardous Air Pollutants
MASS = MA Massachusetts Hazardous Substances List
SARA313 = SARA 313 Title III Toxic Chemicals
TXAIR = TX Air Contaminants with Health Effects Screening Level
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16 OTHER INFORMATION

NOTICE: This information is presented in good faith and believed to be accurate as of the effective date below. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Blendhouse, LLC. assumes no responsibility for personal injury or property damage to vendees, users, or third parties caused by the material. Such vendees or users assume all risks associated with the use of the material. Regulatory requirements are subject to change and may differ from one location to another: it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The preceding specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

Revision Date: 8/31/2020