

Puma-Crete 112 ESD Urethane A

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 01/13/2016

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : ESD-urethane A
Product code : ESD-urethane-A
Other means of identification

1.2. Relevant identified uses of the substance or mixture and uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Puma-Crete Corp
177 Huntington Ave
Boston, MA 02115
857-226-8247

1.4. Emergency telephone number

Emergency number : Chemtrec: 800427-9300 (Outside USA) 703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2A H319
Specific target organ toxicity — Repeated exposure, Category 2 H373
Full text of H statements : see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

GHS08

Signal word (GHS-US) : Warning
Contains : dibutyltin dilaurate
Hazard statements (GHS-US) : H315 - Causes skin irritation
H319 - Causes serious eye irritation
H373 - May cause damage to organs through prolonged or repeated exposure
Precautionary statements (GHS-US) : P260 - Do not breathe vapours
P264 - Wash hands, forearms and face thoroughly after handling
P280 - Wear protective clothing
P302+P352 - If on skin: Wash with plenty of soap
P305+P351+P338 - If in eyes: Rinse cautiously 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
P321 - Specific treatment (see Call a doctor if symptoms persist. on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P501 - Dispose of contents/container to in accordance with local regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
dipropylene1-(2-methoxy-1-propoxy)-1-propan-2-ol	(CAS No) 88917-22-0	> 30	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319
Silicon Dioxide	(CAS No) 14808-60-7	10 - 15	Carc. 1A, H350
2-Ethylhexan-1-ol	(CAS No) 104-76-7	0 - 5	Flam. Liq. 4, H227
1-methoxy-2-propyl acetate	(CAS No) 108-65-6	0.15 - 0.5	Flam. Liq. 3, H226
n-butyl ester of acetic acid	(CAS No) 123-86-4	0.05 - 0.1	Flam. Liq. 3, H226
dibutyltin dilaurate	(CAS No) 77-58-7	< 0.05	Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1-methyl-2-pyrrolidone	(CAS No) 872-50-4	0.072 - 0.01	Flam. Liq. 4, H227

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after skin contact : Irritation.
- Symptoms/injuries after eye contact : Eye irritation. Mild eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

- Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

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6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in a well-ventilated place. Keep cool.
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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2-Ethylhexan-1-ol (104-76-7)		
Not applicable		
dipropylene1-(2-methoxy-1-propoxy)-1-propan-2-ol (88917-22-0)		
Not applicable		
1-methoxy-2-propyl acetate (108-65-6)		
Not applicable		
n-butyl ester of acetic acid (123-86-4)		
ACGIH	ACGIH TWA (ppm)	150 ppm (n-Butyl acetate; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (ppm)	200 ppm (n-Butyl acetate; USA; Short time value; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	Eye & URT irr
OSHA	OSHA PEL (TWA) (mg/m ³)	710 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	150 ppm
dibutyltin dilaurate (77-58-7)		
ACGIH	ACGIH TWA (mg/m ³)	0.1 mg/m ³ (Tin organic compounds, as Sn; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (mg/m ³)	0.2 mg/m ³ (Tin organic compounds, as Sn; USA; Short time value; TLV - Adopted Value)
1-methyl-2-pyrrolidone (872-50-4)		
Not applicable		
Silicon Dioxide (14808-60-7)		
ACGIH	ACGIH TWA (mg/m ³)	0.025 mg/m ³ (Silica-Crystalline Quartz; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction)
OSHA	Remark (OSHA)	(3) See Table Z-3.

8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Hand protection	: Protective gloves.
Eye protection	: Safety glasses.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment.
Environmental exposure controls	: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
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Colour	: White opaque liquid
Odour	: Slight solvent smell
Odour threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 170 °F
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Relative vapour density at 20 °C	: No data available
Solubility	: Water: Solubility in water of component(s) of the mixture : • 2-Ethylhexan-1-ol: 0.9 g/l (20 °C) • dipropylene1-(2-methoxy-1-propoxy)-1-propan-2-ol: 19 g/100ml • Xylenes: < 0.02 g/100ml • 2-Phenoxyethanol: 2.7 g/100ml • 1-methoxy-2-propyl acetate: 19.8 g/100ml (20 °C, soluble) • n-butyl ester of acetic acid: 0.53 g/100ml (20 °C) • 1-Acetoxy-2-methoxypropane: 40 g/100ml • lithium chloride: 45 g/100ml • 1-methyl-2-pyrrolidone: 100 g/100ml (20 °C, soluble) • dibutyltin dilaurate: g/100ml (20 °C) 1.43E-4 • Muscovite mica: insoluble • Silicon Dioxide: insoluble • 1-methoxy-2-hydroxypropane: > 10 g/100ml (20 °C, Complete)
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

2-Ethylhexan-1-ol (104-76-7)

LD50 oral rat	3290 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Experimental value)
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2-Ethylhexan-1-ol (104-76-7)	
LD50 dermal rat	> 3000 mg/kg bodyweight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
LD50 dermal rabbit	> 2600 mg/kg bodyweight (Rabbit; Experimental value; Equivalent or similar to OECD 402)
ATE US (oral)	3290.000 mg/kg bodyweight
dipropylene1-(2-methoxy-1-propoxy)-1-propan-2-ol (88917-22-0)	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
1-methoxy-2-propyl acetate (108-65-6)	
LD50 oral rat	6190 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rat	> 2000 mg/kg (Rat; Experimental value; Equivalent or similar to OECD 402)
LD50 dermal rabbit	> 2000 mg/kg bodyweight (Rabbit; Experimental value; Equivalent or similar to OECD 402)
ATE US (oral)	6190.000 mg/kg bodyweight
n-butyl ester of acetic acid (123-86-4)	
LD50 oral rat	10760 - 12789 mg/kg bodyweight (Rat; Equivalent or similar to OECD 423; Experimental value)
LD50 dermal rabbit	14112 mg/kg bodyweight (Rabbit; Experimental value; Equivalent or similar to OECD 402)
ATE US (oral)	10760.000 mg/kg bodyweight
ATE US (dermal)	14112.000 mg/kg bodyweight
dibutyltin dilaurate (77-58-7)	
LD50 oral rat	2071 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rat	> 2000 mg/kg bodyweight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
ATE US (oral)	2071.000 mg/kg bodyweight
1-methyl-2-pyrrolidone (872-50-4)	
LD50 oral rat	3914 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 4150 mg/kg bodyweight; Rat; Experimental value)
ATE US (oral)	3914.000 mg/kg bodyweight
ATE US (dermal)	7000.000 mg/kg bodyweight

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Silicon Dioxide (14808-60-7)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

Specific target organ toxicity (repeated exposure)	: May cause damage to organs through prolonged or repeated exposure.
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Aspiration hazard	: Not classified
Symptoms/injuries after skin contact	: Irritation.
Symptoms/injuries after eye contact	: Eye irritation. Mild eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
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2-Ethylhexan-1-ol (104-76-7)	
EC50 Daphnia 1	39 mg/l (EC50; EU Method C.2; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
LC50 fish 2	17.1 mg/l (LC50; EU Method C.1; 96 h; Leuciscus idus; Flow-through system; Fresh water; Experimental value)

1-methoxy-2-propyl acetate (108-65-6)	
EC50 Daphnia 1	380 mg/l (EC50; Equivalent or similar to OECD 202; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
LC50 fish 2	100 - 180 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Oncorhynchus mykiss; Static system; Fresh water; Experimental value)
Threshold limit algae 1	>= 1000 mg/l (NOEC; OECD 201: Alga, Growth Inhibition Test; 96 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)
Threshold limit algae 2	> 1000 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 96 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)

n-butyl ester of acetic acid (123-86-4)	
LC50 fish 1	18 mg/l (LC50; Equivalent or similar to OECD 203; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 1	44 mg/l (EC50; Other; 48 h; Daphnia sp.; Static system; Fresh water; Experimental value)
Threshold limit algae 1	674.7 mg/l (EC50; Other; 72 h; Desmodesmus subspicatus; Static system; Fresh water; Experimental value)
Threshold limit algae 2	200 mg/l (NOEC; Other; 72 h; Desmodesmus subspicatus; Static system; Fresh water; Experimental value)

dibutyltin dilaurate (77-58-7)	
Threshold limit algae 1	> 1 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Scenedesmus subspicatus; Static system; Fresh water; Experimental value)

1-methyl-2-pyrrolidone (872-50-4)	
LC50 fish 1	3048 mg/l (LC50; 96 h; Salmo gairdneri)
EC50 Daphnia 1	4897 mg/l (EC50; 48 h; Daphnia magna)
Threshold limit algae 1	> 500 mg/l (EC50)
Threshold limit algae 2	600.5 mg/l (EC50; DIN 38412-9; 72 h; Desmodesmus subspicatus; Static system; Fresh water; Experimental value)

12.2. Persistence and degradability

2-Ethylhexan-1-ol (104-76-7)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.

dipropylene1-(2-methoxy-1-propoxy)-1-propan-2-ol (88917-22-0)	
Persistence and degradability	Biodegradability in water: no data available.

1-methoxy-2-propyl acetate (108-65-6)	
Persistence and degradability	Readily biodegradable in water. Readily biodegradable in the soil. Low potential for adsorption in soil.

n-butyl ester of acetic acid (123-86-4)	
Persistence and degradability	Readily biodegradable in water. Low potential for adsorption in soil. Photolysis in the air.
ThOD	2.21 g O ₂ /g substance
BOD (% of ThOD)	0.46

dibutyltin dilaurate (77-58-7)	
Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available.

1-methyl-2-pyrrolidone (872-50-4)	
Persistence and degradability	Readily biodegradable in water. Inherently biodegradable. Biodegradable in the soil. Highly mobile in soil. Photodegradation in the air.
Biochemical oxygen demand (BOD)	1.07 g O ₂ /g substance
Chemical oxygen demand (COD)	1.56 g O ₂ /g substance
ThOD	1.9 g O ₂ /g substance
BOD (% of ThOD)	0.56

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Silicon Dioxide (14808-60-7)

Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

12.3. Bioaccumulative potential

2-Ethylhexan-1-ol (104-76-7)

BCF other aquatic organisms 1	25.33 (BCF; BCFWIN)
Log Pow	2.9 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

dipropylene1-(2-methoxy-1-propoxy)-1-propan-2-ol (88917-22-0)

Log Pow	0.66 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

1-methoxy-2-propyl acetate (108-65-6)

Log Pow	1.2 (Experimental value; Equivalent or similar to OECD 117; 20 °C; 0.36; Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

n-butyl ester of acetic acid (123-86-4)

BCF fish 1	15.3 (BCF)
Log Pow	2.3 (Test data; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

dibutyltin dilaurate (77-58-7)

BCF fish 1	31 - 813 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 7 days; Carassius carassius; Flow-through system; Fresh water; Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

1-methyl-2-pyrrolidone (872-50-4)

Log Pow	-0.73 - -0.46 (Experimental value; Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

2-Ethylhexan-1-ol (104-76-7)

Surface tension	0.000047 N/m (20 °C; 0.81 g/l)
Log Koc	Koc,PCKOCWIN v1.66; 26.01; Calculated value

1-methoxy-2-propyl acetate (108-65-6)

Surface tension	0.0294 N/m (20 °C; 100 vol %)
Log Koc	log Koc,0.264; QSAR

n-butyl ester of acetic acid (123-86-4)

Surface tension	0.0163 N/m (20 °C)
Log Koc	log Koc, SRC PCKOCWIN v2.0; 1.268/1.844; QSAR

1-methyl-2-pyrrolidone (872-50-4)

Surface tension	0.407 N/m
Log Koc	Koc,20.94; Calculated value; log Koc; 1.32; Calculated value

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

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SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

TDG

TDG Proper Shipping Name : Not Regulated

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

ESD-200-A

Listed on the United States TSCA (Toxic Substances Control Act) inventory

2-Ethylhexan-1-ol (104-76-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

dipropylene1-(2-methoxy-1-propoxy)-1-propan-2-ol (88917-22-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

1-methoxy-2-propyl acetate (108-65-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

n-butyl ester of acetic acid (123-86-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Not subject to reporting requirements of the United States SARA Section 313

CERCLA RQ

5000 lb

dibutyltin dilaurate (77-58-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

1-methyl-2-pyrrolidone (872-50-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Subject to reporting requirements of United States SARA Section 313

Silicon Dioxide (14808-60-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

Silicon Dioxide (14808-60-7)

Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

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1-methyl-2-pyrrolidone (872-50-4)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	Yes	No	No	3200

n-butyl ester of acetic acid (123-86-4)

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

1-methyl-2-pyrrolidone (872-50-4)

U.S. - New Jersey - Right to Know Hazardous Substance List

Silicon Dioxide (14808-60-7)

U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Other information

: Disclaimer: This SDS to the best of our knowledge conforms to the requirements of OSHA 20 CFR 1910.1200 and summarizes the health and safety hazard information and general guidance on how to safely handle the material at the date of issue. Each user must review the SDS in the context of how the product will be handled and used in the workplace.

Full text of H-statements:

H226	Flammable liquid and vapour
H227	Combustible liquid
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H350	May cause cancer
H360	May damage fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

NFPA health hazard

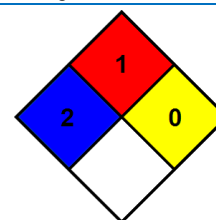
: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard

: 1 - Must be preheated before ignition can occur.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health

: 2 Moderate Hazard - Temporary or minor injury may occur

Flammability

: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

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Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

CERCLA RQ

100 lb

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Other information

: Disclaimer: This SDS to the best of our knowledge conforms to the requirements of OSHA 20 CFR 1910.1200 and summarizes the health and safety hazard information and general guidance on how to safely handle the material at the date of issue. Each user must review the SDS in the context of how the product will be handled and used in the workplace.

Full text of H-phrases:

H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H330	Fatal if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled

NFPA health hazard

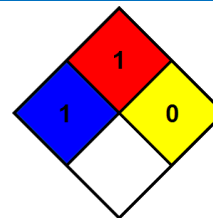
: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard

: 1 - Must be preheated before ignition can occur.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health

: 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability

: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

Emergency number : Chemtrec: 800-427-9300 (Outside USA) 703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin corrosion/irritation Category 2 H315

Serious eye damage/eye irritation Category 2A H319

Respiratory sensitisation Category 1 H334

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)

:



GHS08

Signal word (GHS-US)

: Danger

Contains

: Hexamethylene Diisocyanate; Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester

Hazard statements (GHS-US)

: H315 - Causes skin irritation
H319 - Causes serious eye irritation
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements (GHS-US)

: P261 - Avoid breathing fume, vapors
P264 - Wash hands, forearms and face thoroughly after handling
P280 - Wear protective clothing
P284 - In case of poor ventilation
P302+P352 - If on skin: Wash with plenty of soap
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P321 - Specific treatment (see a doctor if symptoms do not go away. on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P342+P311 - If experiencing respiratory symptoms: Call a doctor
P362+P364 - Take off contaminated clothing and wash it before reuse
P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste

2.3. Other hazards

Other hazards not contributing to the

: None under normal conditions.

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classification

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Hexamethylene Diisocyanate	(CAS No) 28182-81-2	80 - 90	Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317
Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester	(CAS No) 822-06-0	0 - 0.5	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1C, H314 Resp. Sens. 1, H334

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Get medical advice/attention if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: When symptoms occur: rinse immediately with plenty of water.
First-aid measures after eye contact	: Rinse immediately with plenty of water.
First-aid measures after ingestion	: Give nothing or a little water to drink. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: Irritation of respiratory tract.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: Irritation of the gastric/intestinal mucosa.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Alcohol resistant foam, water, water fog, CO2, dry chemical, dry sand, limestone powder.
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5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	: Wear self-contained breathing apparatus for firefighting if necessary.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Absorb spillage to prevent material damage.
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6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage. Dam up the liquid spill.
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Methods for cleaning up : Absorb spillage to prevent material damage. Cover the solid spill with dry sand/earth/vermiculite soda ash or powdered limestone.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Work under local exhaust/ventilation. Wear personal protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use. Store in a dry place. Store in a closed container.
Incompatible products : Strong acids. Strong bases.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Hexamethylene Diisocyanate (28182-81-2)

Not applicable

Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

ACGIH	ACGIH TWA (ppm)	0.005 ppm (Hexamethylene diisocyanate; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	URT irr; resp sens

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Personal protective equipment : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hand protection : Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product.
Eye protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH.
Skin and body protection : Wear suitable protective clothing.
Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Color : Colourless to light yellow
Odor : Faint Odor
Odor threshold : No data available
pH : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : 208 °C
Relative evaporation rate (butyl acetate=1) : No data available
Flammability (solid, gas) : No data available
Explosion limits : No data available
Explosive properties : No data available
Oxidizing properties : No data available
Vapor pressure : No data available
Relative density : No data available
Relative vapor density at 20 °C : No data available

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Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: > 200 °C
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong acids, strong bases and oxidation agents.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)	
LD50 oral rat	745 mg/kg (Rat)
LD50 dermal rabbit	599 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	0.31 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	45 ppm/4h (Rat)
ATE US (oral)	745.000 mg/kg body weight
ATE US (dermal)	599.000 mg/kg body weight
ATE US (gases)	45.000 ppmV/4h
ATE US (vapors)	0.310 mg/l/4h
ATE US (dust, mist)	0.310 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. Not classified.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: Irritation of respiratory tract.
Symptoms/injuries after skin contact	: Causes skin irritation.

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Symptoms/injuries after eye contact : Causes eye irritation.
Symptoms/injuries after ingestion : Irritation of the gastric/intestinal mucosa.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified due to lack of data.

Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

LC50 fish 1	22 mg/l (LC0; Other; 96 h; Brachydanio rerio; Static system)
EC50 Daphnia 1	< 0.33 mg/l (EC0; Other; 24 h; Daphnia magna; Static system)
LC50 fish 2	31 mg/l (LC100; Other; 96 h; Brachydanio rerio; Static system)

12.2. Persistence and degradability

ESD-200-B

Persistence and degradability	Not established.
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Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

Persistence and degradability	Not readily biodegradable in water. Low potential for adsorption in soil.
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12.3. Bioaccumulative potential

ESD-200-B

Bioaccumulative potential	Not established.
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Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

Log Pow	1.08 (QSAR)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

ESD-200-B

Ecology - soil	No Data Available.
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12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Collect all waste in suitable and labeled containers and dispose according to local legislation.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT
Not regulated for transport

TDG

No additional information available

Transport by sea

No additional information available

Air transport

Proper Shipping Name (IATA) : Not Regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester	CAS No 822-06-0	0 - 0.5%
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