

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

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Seatak

SECTION 1: Identification

Product Identifier

Product Name: Seatak

Recommended Use of the Product and Restriction on Use

Relevant Identified Uses: Adhesive

Uses Advised Against: Any use other than recommended above.

Reasons Why Uses Advised Against: Not determined or not applicable.

Manufacturer or Supplier Details

Manufacturer: United States

Mussel Polymers 116 Research Drive Bethlehem, PA 18015 484-373-9415 musselpolymers.com

Emergency Telephone Number:

United States

CHEMTREC

1-800-424-9300 (24 hours)

Outside USA and Canada: +1-703-741-5970 (24 hours)

SECTION 2: Hazard(s) Identification

GHS Classification:

Acute toxicity (inhalation), category 4

Skin irritation, category 2

Eye irritation, category 2A

Respiratory sensitization, category 1

Skin sensitization, category 1

Carcinogenicity, category 2

Specific target organ toxicity - single exposure, category 3, respiratory tract irritation

Specific target organ toxicity - repeated exposure, category 2

Label elements

Hazard Pictograms:





Signal Word: Danger

Hazard statements: H315 Causes skin irritation

H319 Causes serious eye irritation

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H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317 May cause an allergic skin reaction

H351 Suspected of causing cancer if inhaled.

H335 May cause respiratory irritation

H373 May cause damage to organs through prolonged or repeated exposure.

H332 Harmful if inhaled

Precautionary Statements:

P201 Obtain special instructions before use

P202 Do not handle until all safety precautions have been read and understood

P260 Do not breathe dust, fumes, gas, mist, vapors or spray.

P264 Wash any exposed skin thoroughly after handling

P271 Use only outdoors or in a well-ventilated area

P272 Contaminated work clothing must not be allowed out of the workplace

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

P284 In case of inadequate ventilation wear respiratory protection.

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

P333+P313 If skin irritation or rash occurs: Get medical advice and attention.

P321 Specific treatment (see Sections 4-8 of this SDS and any supplemental information on the product label).

P362 Take off contaminated clothing and wash it before reuse

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337+P313 If eye irritation persists: Get medical advice and attention.

P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or physician.

P308+P313 If exposed or concerned: Get medical advice and attention.

P314 Get medical advice and attention if you feel unwell.

P405 Store locked up

P403+P233 Store in a well-ventilated place. Keep container tightly closed

P501 Dispose of contents and container in accordance with local, regional, national, and international regulations.

Hazards Not Otherwise Classified: None

SECTION 3: Composition/Information on Ingredients

Identification	Name	Weight %
CAS Number: Trade Secret	Polypropylene glycol, polymethylenepolyphenylisocyanate polymer	20-40
CAS Number: 101-68-8	4,4'-methylenediphenyl diisocyanate	5-20
CAS Number: 9016-87-9	Diphenylmethanediisocynate	5-20
CAS Number: 67762-90-7	Silicon Dioxide	3-10
CAS Number: Trade secret	Proprietary polymer	0.1-5

Additional Information:

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The specific chemical identity and/or exact percentages (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of the OSHA Hazard Communication Standard (29 CFR §1910.1200).

SECTION 4: First Aid Measures

Description of First Aid Measures

General Notes:

Show this Safety Data Sheet to the doctor in attendance. Take precautions to ensure your own safety before attempting rescue. Wear appropriate safety eyewear, gloves, protective clothing and respiratory protection to prevent exposure. See Section 8 of this SDS for personal protective equipment recommendations. Do not use the mouth to mouth method if victim has ingested or inhaled the product. Give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper device.

After Inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If exposed, seek medical advice/attention.

After Skin Contact:

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

After Eye Contact:

Rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

After Swallowing:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention.

Most Important Symptoms and Effects, Both Acute and Delayed **Acute Symptoms and Effects:**

Isocyanates are skin and eye irritants. Many isocyanates are also skin sensitizers. Skin contact may result in redness, irritation, itching, blistering, inflammation, rash and allergic dermatitis. The effects of sensitization may not be limited to the point of contact, so the surrounding skin is also affected. Eye contact may result in redness, tearing, inflammation, swelling and burning. Splashes to the eye may cause chemical conjunctivitis.

Inhalation of isocyanate mists or vapors may cause respiratory irritation, breathlessness, chest discomfort and reduced pulmonary function. Overexposure well above occupational exposure limits may result in bronchitis, bronchial spasms and pulmonary edema.

Many isocyanates are respiratory sensitizers and exposure may result in allergic respiratory reactions including wheezing, shortness of breath and difficulty breathing. Respiratory sensitization may also be brought on by skin exposure. A sensitized person's subsequent exposure to airborne concentrations well below the exposure standard can cause asthmatic reactions like chest tightness, wheezing, shortness of breath and airway narrowing. This can be life threatening if exposure continues.

Delayed Symptoms and Effects:

Suspected of causing cancer. Effects are dependent on exposure (dose, concentration, contact time). The symptoms of inhalation exposure may be delayed. Adverse effects and symptoms may occur several hours later or during the night following isocyanate exposure. People who develop sensitization to

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isocyanates usually do so some time following their first exposure. This time period is highly variable. It can be several weeks or up to two years or more.

Long-term exposure to isocyanates may cause lung damage, including reduced lung function which may be permanent.

Continuous overexposure to isocyanates can lead to pulmonary sensitization or "isocyanate asthma." When this occurs, symptoms improve when the irritant is removed. However, acute asthma attacks occur on renewed exposure, even when the encounter is very brief or at low concentrations and can cause death.

Exposure of the skin to isocyanates over a longer period can lead to chronic skin conditions like dermatitis.

Immediate Medical Attention and Special Treatment

Specific Treatment:

If respiratory symptoms persist, seek medical attention.

Notes for the Doctor:

Treat symptomatically.

The adverse effects and symptoms of exposure may be delayed. Therefore, medical observation is indicated.

SECTION 5: Firefighting Measures

Extinguishing Media

Suitable Extinguishing Media:

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

Unsuitable Extinguishing Media:

Do not use water jet.

Specific Hazards During Fire-Fighting:

Containers may explode when heated. Thermal decomposition may produce irritating and toxic fumes including carbon oxides, nitrogen oxides, hydrogen cyanide and isocyanate vapor.

Special Protective Equipment for Firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

Methods and Material for Containment and Cleaning Up:

Harmful if inhaled. Put on appropriate personal protective equipment, including a self-contained breathing apparatus (see Section 8) before entering area of spill or leak. Avoid breathing dust, mist, fumes, vapors or

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spray. Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Reference to Other Sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and Storage

Precautions for Safe Handling:

Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Protect from moisture. Keep out of the reach of children.

Conditions for Safe Storage, Including Any Incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10). Store between 15 °C (59°F) and 30 °C (86°F). Below temperature limit the product properties will change.

SECTION 8: Exposure Controls/Personal Protection

Only those substances with limit values have been included below.

Occupational Exposure Limit Values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	4,4'-methylenediphenyl diisocyanate	101-68-8	8-Hour TWA: 0.005 ppm
NIOSH	4,4'-methylenediphenyl diisocyanate	101-68-8	IDLH: 75 mg/m³
	4,4'-methylenediphenyl diisocyanate	101-68-8	Ceiling Limit: 0.2 mg/m³ (0.020 ppm [10-min])
	4,4'-methylenediphenyl diisocyanate	101-68-8	REL-TWA: 0.05 mg/m³ (0.005 ppm [up tp 10 hr])
OSHA	4,4'-methylenediphenyl diisocyanate	101-68-8	PEL Ceiling: 0.2 mg/m³ (0.02 ppm)
United States(California)	4,4'-methylenediphenyl diisocyanate	101-68-8	8-Hour TWA-PEL: 0.051 mg/m ³ (0.005 ppm)
	Diphenylmethanediisocynate	9016-87-9	REL-TWA: 12 ug/m³ ([Acute Inhalation])
	Diphenylmethanediisocynate	9016-87-9	REL-TWA: 0.08 ug/m³ ([Chronic Inhalation])

Biological Limit Values:

No biological exposure limits noted for the ingredient(s).

Information on Monitoring Procedures:

Not determined or not applicable.

Appropriate Engineering Controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal Protection Equipment

Eye and Face Protection:

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Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and Body Protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

General Hygienic Measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Odor threshold Not determined or not available. PH Not determined or not available. Melting point/freezing point Not determined or not available. Initial boiling point/range Not determined or not available. Flash point (closed cup) > 93.34 °C (> 200.01 °F) ASTM D-93, estimated Evaporation rate Not determined or not available. Flammability (solid, gas) Not determined or not available. Upper flammability/explosive limit Not determined or not available. Lower flammability/explosive limit Not determined or not available. Vapor pressure Not determined or not available. Vapor density Not determined or not available. Partition coefficient (n-octanol/water) Not determined or not available.		T
Odor threshold pH Not determined or not available. Melting point/freezing point Not determined or not available. Initial boiling point/range Not determined or not available. Flash point (closed cup) > 93.34 °C (> 200.01 °F) ASTM D-93, estimated Evaporation rate Not determined or not available. Flammability (solid, gas) Not determined or not available. Upper flammability/explosive limit Not determined or not available. Lower flammability/explosive limit Not determined or not available. Vapor pressure Not determined or not available. Vapor density Not determined or not available. Density Not determined or not available. Relative density 1.3 at 28.9°C (75°F), approximately Solubilities Not determined or not available. Not determined or not available.	Appearance	Yellowish, solid
pH Not determined or not available. Melting point/freezing point Not determined or not available. Initial boiling point/range Not determined or not available. Flash point (closed cup) > 93.34 °C (> 200.01 °F) ASTM D-93, estimated Evaporation rate Not determined or not available. Flammability (solid, gas) Not determined or not available. Upper flammability/explosive limit Not determined or not available. Lower flammability/explosive limit Not determined or not available. Vapor pressure Not determined or not available. Vapor density Not determined or not available. Density Not determined or not available. Relative density 1.3 at 28.9°C (75°F), approximately Solubilities Not determined or not available. Partition coefficient (n-octanol/water) Not determined or not available.	Odor	Mild aromatic
Melting point/freezing point Initial boiling point/range Not determined or not available. Flash point (closed cup) > 93.34 °C (> 200.01 °F) ASTM D-93, estimated Evaporation rate Not determined or not available. Flammability (solid, gas) Not determined or not available. Upper flammability/explosive limit Not determined or not available. Lower flammability/explosive limit Not determined or not available. Vapor pressure Not determined or not available. Vapor density Not determined or not available. Density Not determined or not available. Relative density 1.3 at 28.9°C (75°F), approximately Solubilities Not determined or not available. Partition coefficient (n-octanol/water) Not determined or not available.	Odor threshold	Not determined or not available.
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Evaporation rate Flammability (solid, gas) Not determined or not available. Upper flammability/explosive limit Not determined or not available. Lower flammability/explosive limit Not determined or not available. Vapor pressure Not determined or not available. Vapor density Not determined or not available. Density Not determined or not available. Relative density 1.3 at 28.9°C (75°F), approximately Solubilities Not determined or not available. Partition coefficient (n-octanol/water) Not determined or not available.	Initial boiling point/range	Not determined or not available.
Flammability (solid, gas) Upper flammability/explosive limit Not determined or not available. Lower flammability/explosive limit Not determined or not available. Vapor pressure Not determined or not available. Vapor density Not determined or not available. Density Not determined or not available. Relative density 1.3 at 28.9°C (75°F), approximately Solubilities Not determined or not available. Partition coefficient (n-octanol/water) Not determined or not available.	Flash point (closed cup)	> 93.34 °C (> 200.01 °F) ASTM D-93, estimated
Upper flammability/explosive limit Not determined or not available. Vapor pressure Not determined or not available. Vapor density Not determined or not available. Vapor density Not determined or not available. Pensity Not determined or not available. Partition coefficient (n-octanol/water) Not determined or not available.	Evaporation rate	Not determined or not available.
Lower flammability/explosive limit Not determined or not available. Vapor pressure Not determined or not available. Vapor density Not determined or not available. Density Not determined or not available. Relative density 1.3 at 28.9°C (75°F), approximately Solubilities Not determined or not available. Partition coefficient (n-octanol/water) Not determined or not available.	Flammability (solid, gas)	Not determined or not available.
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Solubilities Not determined or not available. Partition coefficient (n-octanol/water) Not determined or not available.	Density	Not determined or not available.
Partition coefficient (n-octanol/water) Not determined or not available.	Relative density	1.3 at 28.9°C (75°F), approximately
	Solubilities	Not determined or not available.
Auto/Self-ignition temperature Not determined or not available	Partition coefficient (n-octanol/water)	Not determined or not available.
not determined of not dvalidate.	Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature Not determined or not available.	Decomposition temperature	Not determined or not available.
Dynamic viscosity Not determined or not available.	Dynamic viscosity	Not determined or not available.
Kinematic viscosity Not determined or not available.	Kinematic viscosity	Not determined or not available.
Explosive properties Not determined or not available.	Explosive properties	Not determined or not available.
Oxidizing properties Not determined or not available.	Oxidizing properties	Not determined or not available.

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SECTION 10: Stability and Reactivity

Reactivity:

Not reactive under recommended handling and storage conditions.

Chemical Stability:

Stable under recommended handling and storage conditions.

Possibility of Hazardous Reactions:

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

Conditions to Avoid:

Avoid confined spaces, extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Avoid storage in humid or elevated temperature locations.

Incompatible Materials:

Strong oxidizing agents; Acids; Amines; Alcohols; Strong bases; Alkalines; Water

Hazardous Decomposition Products:

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

SECTION 11: Toxicological Information

Acute Toxicity

Assessment:

Harmful if inhaled.

Product Data: No data available.

Substance Data:

Name	Route	Result
Polypropylene glycol, polymethylenepolyphenylisocy anate polymer	Inhalation ATE	LC50 Rat: 11 mg/L (4 hr [vapor])
4,4'-methylenediphenyl diisocyanate	oral	LD50 Rat: 9200 mg/kg
	inhalation	LC50 Rat: 368 mg/m³ (4 hr [Aerosol])
	dermal	LD50 Rabbit: >7940 mg/kg
Diphenylmethanediisocynate	inhalation	LC50 Rat: 0.49 mg/L (4 Hour [Mist])
	oral	LD50 Rat: >10000 mg/kg
	dermal	LD50 Rabbit: >9400 mg/kg

Skin Corrosion/Irritation

Assessment:

Causes skin irritation.

Product Data:

No data available.

Substance Data:

Name	Result
Polypropylene glycol, polymethylenepolyphenylisocy anate polymer	Causes skin irritation.
4,4'-methylenediphenyl diisocyanate	Causes skin irritation.
Diphenylmethanediisocynate	Causes skin irritation.

Serious Eye Damage/Irritation

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Assessment:

Causes serious eye irritation.

Product Data:

No data available.

Substance Data:

Name	Result
Polypropylene glycol, polymethylenepolyphenylisocy anate polymer	Causes serious eye irritation.
4,4'-methylenediphenyl diisocyanate	Causes serious eye irritation.
Diphenylmethanediisocynate	Causes serious eye irritation.

Respiratory or Skin Sensitization

Assessment:

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

May cause an allergic skin reaction.

Product Data:

No data available.

Substance Data:

Name	Result
Polypropylene glycol, polymethylenepolyphenylisocy	May cause an allergic skin reaction.
anate polymer	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
4,4'-methylenediphenyl	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
diisocyanate	May cause an allergic skin reaction.
Diphenylmethanediisocynate	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
	May cause an allergic skin reaction.

Carcinogenicity

Assessment:

Suspected of causing cancer. **Product Data:** No data available.

Substance Data:

Name	Species	Result
Polypropylene glycol, polymethylenepolyphenylisocy anate polymer		Suspected of causing cancer.
4,4'-methylenediphenyl diisocyanate		Suspect of causing cancer.

International Agency for Research on Cancer (IARC):

Name	Classification
4,4'-methylenediphenyl diisocyanate	Group 3
Diphenylmethanediisocynate	Group 3
Proprietary polymer	Not Applicable

National Toxicology Program (NTP):

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Name	Classification
Proprietary polymer	Not Applicable

OSHA Carcinogens: Not applicable

Germ Cell Mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data: No data available.

Reproductive Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data: No data available.

Specific Target Organ Toxicity (Single Exposure)

Assessment:

May cause respiratory irritation.

Product Data: No data available. **Substance Data:**

Name	Result
Polypropylene glycol, polymethylenepolyphenylisocy anate polymer	May cause respiratory irritation.
4,4'-methylenediphenyl diisocyanate	May cause respiratory irritation.
Diphenylmethanediisocynate	May cause respiratory irritation.

Specific Target Organ Toxicity (Repeated Exposure)

Assessment:

May cause damage to organs through prolonged or repeated exposure.

Product Data:

No data available.

Substance Data:

Name	Result
Polypropylene glycol, polymethylenepolyphenylisocy anate polymer	May cause damage to organs (respiratory tract), through prolonged or repeated exposure.
4,4'-methylenediphenyl diisocyanate	Prolonged or repeated exposure may damage the respiratory system and lungs, including fibrosis. Long-term exposure may result in restriction of pulmonary function and a decrease in CO single breath transfer factor.
Diphenylmethanediisocynate	May cause damage to respiratory system through prolonged or repeated inhalation.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data: No data available.

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Information on Likely Routes of Exposure:

Inhalation; Ingestion; Skin contact; Eye contact

Symptoms Related to the Physical, Chemical, and Toxicological Characteristics:

Refer to Section 4 of this SDS.

Other Information:

No data available.

SECTION 12: Ecological Information

Acute (Short-Term) Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data:

Name	Result
4,4'-methylenediphenyl diisocyanate	Fish EC50 Danio rerio: >1000 mg/L (96 h)
Diphenylmethanediisocynate Fish LC50 Danio rerio: >1000 mg/L (96 h)	
	Aquatic Plants EC50 Scenedesmus subspicatus: >1640 mg/L (72 h)
	Bacteria EC50 Activated Sludge: >100 mg/L (3 h)

Chronic (Long-Term) Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data:

Name	Result	
4,4'-methylenediphenyl diisocyanate	Aquatic Invertebrates NOEC Daphnia magna: ≥10 mg/L (21 d)	
Diphenylmethanediisocynate	Aquatic Invertebrates NOEC Daphnia magna: >10 mg/L (21 d)	

Persistence and Degradability

Product Data: No data available.

Substance Data:

Name	Result
Diphenylmethanediisocynate	Not biodegradable.
1 ' '	The substance is not readily biodegradable. 0% degradation, measured by BOD, after 28 days.

Bioaccumulative Potential

Product Data: No data available.

Substance Data:

Name	Result
diisocyanate	Due to the fast hydrolysis, exposure of the environment to the substance is unlikely or very low. The log Kow of MDA, the expected hydrolysis product, is 1.55.
	Due to the fast hydrolysis, exposure of the environment to the substance is unlikely or very low. The log Kow of MDA, the expected hydrolysis product, is 1.55.

Mobility in Soil

Product Data: No data available.

Substance Data:

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Name	Result	
4,4'-methylenediphenyl	The substance is immobile to hardly mobile in soil with a strong potential	
diisocyanate	for adsorption to soil and sediment. Estimated Log Koc: 5.5- 18.0 L/kg	

Results of PBT and vPvB assessment

Product Data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT. **vPvB assessment:** This product does not contain any substances that are assessed to be a vPvB.

Substance Data:

PBT assessment:

4,4'-methylenediphenyl diisocyanate	The substance is not PBT.	
Diphenylmethanediisocynate	The substance is not PBT.	
vPvB assessment:		
4,4'-methylenediphenyl diisocyanate	The substance is not vPvB.	
Diphenylmethanediisocynate	The substance is not vPvB.	

Other Adverse Effects: No data available.

SECTION 13: Disposal Considerations

Disposal Methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory agencies. Dispose of in accordance with all applicable local, regional, state and federal regulations.

Contaminated packages:

Not determined or not applicable.

SECTION 14: Transport Information

United States Transportation of Dangerous Goods (49 CFR DOT)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

International Maritime Dangerous Goods (IMDG)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN Number	Not regulated
	1 3

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

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Seatak

UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

SECTION 15: Regulatory Information

United States Regulations

Inventory Listing (TSCA): All ingredients are listed-active or exempt.

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

Export Notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 Extremely Hazardous Substances: None of the ingredients are listed.

SARA Section 313 Toxic Chemicals:

101-68-8	4,4'-methylenediphenyl diisocyanate	Listed
9016-87-9	Diphenylmethanediisocynate	Listed

CERCLA:

101-68-8

101-68-8	4,4'-methylenediphenyl diisocyanate	Listed 5000 Lbs
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RCRA: None of the ingredients are listed.

Section 112(r) of the Clean Air Act (CAA): None of the ingredients are listed.

4,4'-methylenediphenyl diisocyanate

Massachusetts Right to Know:

New Jersey Right to Know:						
	101-68-8	4,4'-methylenediphenyl diisocyanate	Listed			
	9016-87-9	Diphenylmethanediisocynate	Listed			

Listed

New York Right to Know:

101-68-8	4,4'-methylenediphenyl diisocyanate	Listed

Pennsylvania Right to Know:

101-68-8	4,4'-methylenediphenyl diisocyanate	Listed
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California Proposition 65: None of the ingredients are listed.

Additional information: Not determined.

SECTION 16: Other Information

Abbreviations and Acronyms: None Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

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End of Safety Data Sheet