

AceBound UVR Part B

Version 1.0 | Date 2023-03-16

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	AceBound UVR Part B
Synonyms; trade names	HEXAMETHYLENE DIISOCYANATE OLIGOMERS ISOCYANATE TYPE
REACH registration number	01-2119485796-17-XXXX
CAS number	28182-81-2
EC number	931-274-8

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

Identified uses	Binder Chemical Intermediate Adhesive.
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1.3. Details of the supplier of the safety data sheet

Company	ACE Resin Limited
Address	Little Braxted Hall, Witham Road, Little Braxted, Essex, CM8 3EU, UK
Web	www.aceresin.co.uk
Telephone	+44 (0) 20 7856 0295
Email	info@aceresin.co.uk

1.4. Emergency telephone number


Emergency telephone number	+44 (0) 20 7856 0295 (Hours are not 24 hours - 8am -4pm Mon-Fri)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)	
Physical hazards	Not Classified
Health hazards	Acute Tox. 4 - H332 Skin Sens. 1 - H317 STOT SE 3 - H335
Environmental hazards	Not Classified

2.2. Label elements

Hazard pictograms	
Signal word	Warning
Hazard statements	H332 Harmful if inhaled. H317 May cause an allergic skin reaction. H335 May cause respiratory irritation.
Precautionary statements	P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. 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 water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
Contains	DIBUTY TIN DILAURATE

Supplementary precautionary statements	<p>P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P284 [In case of inadequate ventilation] wear respiratory protection.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p>
Contains	HEXAMETHYLENE DIISOCYANATE OLIGOMERS ISOCYANATE TYPE
2.3. Other hazards	
This substance is not classified as PBT or vPvB according to current EU criteria.	

SECTION 3: Composition/information on ingredients

3.1. Substances

HEXAMETHYLENE DIISOCYANATE OLIGOMERS	>= 99.8%
CAS number: –	
EC number: 931-274-8	REACH registration number: 01-2119485796-17-XXXX
Classification	<p>Acute Tox. 4 - H332</p> <p>Skin Sens. 1 - H317</p> <p>STOT SE 3 - H335</p>
HEXAMETHYLENE DIISOCYANATE	<= 0.1%
CAS number: 822-06-0	
EC number: 212-485-8	REACH registration number: 01-2119457571-37-XXXX
Classification	<p>Acute Tox. 4 - H302</p> <p>Acute Tox. 3 - H331</p> <p>Skin Irrit. 2 - H315</p> <p>Eye Irrit. 2 - H319</p> <p>Resp. Sens. 1 - H334</p> <p>Skin Sens. 1 - H317</p> <p>STOT SE 3 - H335</p>
The full text for all hazard statements is displayed in Section 16.	
Product name	ISOCYANATE
REACH registration number	01-2119485796-17-XXXX
CAS number	28182-81-2
EC number	931-274-8
Composition comments	The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	First aid personnel should wear appropriate protective equipment during any rescue. Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration. Get medical attention immediately.
Ingestion	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if symptoms are severe or persist after washing. In the event of any sensitisation symptoms developing, ensure further exposure is avoided.

Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately.
4.2. Most important symptoms and effects, both acute and delayed	
Inhalation	Harmful if inhaled. May cause respiratory irritation. May cause sensitisation by inhalation. Development of symptoms may be delayed for 24 to 48 hours. Keep affected person under observation. Symptoms following overexposure may include the following: Headache. Nausea, vomiting. Shortness of breath. Sore throat. Asthma, pulmonary sensitisation.
Ingestion	May cause discomfort if swallowed.
Skin contact	May cause an allergic skin reaction. Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.
Eye contact	May cause temporary eye irritation.
4.3. Indication of any immediate medical attention and special treatment needed	
Notes for the doctor	Treat symptomatically. Development of symptoms may be delayed for 24 to 48 hours. Keep affected person under observation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Harmful if inhaled. In case of fire and/or explosion do not breathe fumes. When heated, vapours/gases hazardous to health may be formed. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Containers can burst violently or explode when heated, due to excessive pressure build-up
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO ₂). Carbon monoxide (CO). Nitrous gases (NO _x). Hydrocarbons. Isocyanates. Hydrogen cyanide (HCN).

5.3. Advice for firefighters

Protective actions during firefighting	No action shall be taken without appropriate training or involving any personal risk. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Control run-off water by containing and keeping it out of sewers and watercourses. Contain and collect extinguishing water.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	No action shall be taken without appropriate training or involving any personal risk. Wear protective clothing as described in Section 8 of this safety data sheet. Keep unnecessary and unprotected personnel away from the spillage. Provide adequate ventilation. If ventilation is inadequate, suitable respiratory protection must be worn. Approach the spillage from upwind. Avoid inhalation of vapours and contact with skin and eyes.
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6.2. Environmental precautions

Environmental precautions	Avoid the spillage or runoff entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb spillage with inert, damp, non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Clean contaminated objects and areas thoroughly, observing environmental regulations. Reacts with water. Do not close container tightly, due to the risk of excessive pressure buildup. Carbon dioxide (CO ₂).
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6.4. Reference to other sections

Reference to other sections	Wear protective clothing as described in Section 8 of this safety data sheet. Collect and dispose of spillage as indicated in Section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Handle all packages and containers carefully to minimise spills. Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid inhalation of vapours and contact with skin and eyes. Ensure the ventilation system is regularly maintained and tested.
Advice on general occupational hygiene	Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Provide eyewash station and safety shower.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store in tightly-closed, original container in a dry and cool place. Container must be kept tightly closed when not in use. Keep away from food, drink and animal feeding stuffs. Avoid exposure to high temperatures or direct sunlight. Avoid freezing. Only store in correctly labelled containers. Use appropriate containment to avoid environmental contamination. Store away from the following materials: Water, moisture. Acids. Alcohols. Amines. Alkalis. Oxidising agents. Suitable container materials: Mild steel. Stainless steel. Unsuitable container materials: Copper. Other metals or alloys.
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7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits	
HEXAMETHYLENE DIISOCYANATE	Short-term exposure limit (15-minute): 0.07 mg/m ³ Long-term exposure limit (8-hour TWA): 0.02 mg/m ³
HEXAMETHYLENE DIISOCYANATE OLIGOMERS ISOCYANATE TYPE	
Ingredient comments	No exposure limits known for ingredient(s).
DNEL	Workers - Inhalation; Long term local effects: 0.5 mg/m ³ Workers - Inhalation; Short term local effects: 1 mg/m ³
PNEC	- Fresh water; 0.127 mg/l - marine water; 0.0127 mg/l - Intermittent release; 1.27 mg/l - Sediment (Freshwater); 266700 mg/kg - Sediment (Marinewater); 26670 mg/kg - STP; 38.3 mg/l - Soil; 53182 mg/kg
HEXAMETHYLENE DIISOCYANATE (CAS: 822-06-0)	
DNEL	Workers - Inhalation; Short term systemic effects: 0.07 mg/m ³ Workers - Inhalation; Long term systemic effects: 0.035 mg/m ³ Workers - Inhalation; Long term local effects: 0.035 mg/m ³ Workers - Inhalation; Short term local effects: 0.07 mg/m ³
PNEC	- Fresh water; >0.0774 mg/l - marine water; >0.00774 mg/l - STP; 8.42 mg/l - Sediment (Freshwater); >0.01334 mg/kg - Sediment (Marinewater); >0.001334 mg/kg - Soil; >0.0026 mg/kg - Intermittent release; 0.774 mg/l

8.2. Exposure controls	
Protective equipment	
Appropriate engineering controls	Provide adequate ventilation. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist. Avoid inhalation of vapours and contact with skin and eyes. Provide eyewash station and safety shower.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. The selected gloves should have a breakthrough time of at least 8 hours. To protect hands from chemicals, gloves should comply with European Standard EN374. It is recommended that gloves are made of the following material: Butyl rubber. Protective gloves should have a minimum thickness of 0.5 mm. Neoprene. Protective gloves should have a minimum thickness of 0.5 mm. Nitrile rubber. Protective gloves should have a minimum thickness of 0.35 mm. Frequent changes are recommended.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	Wash at the end of each work shift and before eating, smoking and using the toilet. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Use suitable lotion to moisturise skin. Care should be taken to avoid contact with contaminants when removing contaminated clothing. Wash contaminated clothing before reuse. Provide eyewash station and safety shower.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P2. Gas and combination filter cartridges should comply with European Standard EN14387.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Yellowish.
Odour	Slight.
Odour threshold	No information available.
pH	No information available.
Melting point	-24°C
Initial boiling point and range	No information available.
Flash point	- 158°C
Evaporation rate	No information available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	No information available.
Vapour pressure	0.00246 Pa @ 20°C
Vapour density	No information available.
Relative density	1.16 @ 25°C
Bulk density	- 1160 kg/m ³

Solubility(ies)	Hydrolytically unstable.
Partition coefficient	log Pow: 9.81 Calculation method.
Auto-ignition temperature	No information available.
Decomposition Temperature	250°C
Viscosity	1750 - 3250 mPa s @ 25°C
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.
9.2. Other information	
Other information	No information required.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No test data specifically related to reactivity available for this product or its ingredients.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. Hydrolytically unstable. The product reacts with water to form a solid, insoluble reaction product which is not biodegradable.
The following materials may react with the product: Water Alcohols.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Under normal conditions of storage and use, no hazardous reactions will occur. Reacts with water. Contents may develop pressure upon prolonged storage. Carbon dioxide (CO₂).

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time. Avoid freezing. Will decompose at temperatures exceeding 250°C. Containers can burst violently or explode when heated, due to excessive pressure build-up.

10.5. Incompatible materials

Materials to avoid Avoid contact with the following materials: Water Acids. Alcohols. Amines. Alkalis. Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO₂). Carbon monoxide (CO). Toxic gases or vapours. Irritating gases or vapours. Acrid smoke or fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD50) LD50>2500 mg/kg, Oral, Rat, Female

Acute toxicity - dermal

Notes (dermal LD50) LD50 >2000 mg/kg, Dermal, Rat

Acute toxicity - inhalation

Notes (inhalation LC50) Harmful if inhaled.
LC50 390 - 543 mg/m³, 4 hour, Aerosol Rat

ATE inhalation (dusts/mists mg/l)

1.5

Skin corrosion/irritation

Skin corrosion/irritation Slightly irritating. Rabbit

Serious eye damage/irritation

Serious eye damage/irritation Slightly irritating. Rabbit

Respiratory sensitisation	
Respiratory sensitisation	Guinea pig: Aerosol, Not sensitising.
Skin sensitisation	
Skin sensitisation	May cause an allergic skin reaction. Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.
Germ cell mutagenicity	
Genotoxicity - in vitro	Gene mutation: Negative.
Genotoxicity - in vivo	No information available.
Carcinogenicity	
Carcinogenicity	No information available.
Reproductive toxicity	
Reproductive toxicity - fertility	No information available.
Reproductive toxicity - development	No information available.
Specific target organ toxicity - single exposure	
STOT - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	NOAEL (13w, 6h/d, 5d/w) 3.3 mg/m ³ , Inhalation, Aerosol, Rat
Aspiration hazard	
Aspiration hazard	Based on available data the classification criteria are not met.
Inhalation	Harmful if inhaled. May cause respiratory irritation. May cause sensitisation by inhalation. Development of symptoms may be delayed for 24 to 48 hours. Keep affected person under observation. Symptoms following overexposure may include the following: Headache. Nausea, vomiting. Shortness of breath. Sore throat. Asthma, pulmonary sensitisation.
Ingestion	May cause discomfort if swallowed.
Skin contact	May cause an allergic skin reaction. Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.
Eye contact	May cause temporary eye irritation.
Toxicological information on ingredients.	
HEXAMETHYLENE DIISOCYANATE OLIGOMERS ISOCYANATE TYPE	
Acute toxicity - oral	
Notes (oral LD50)	LD50 >2500 mg/kg, Oral, Rat
Acute toxicity - dermal	
Notes (dermal LD50)	LD50 >2000 mg/kg, Dermal, Rat
Acute toxicity - inhalation	
Notes (inhalation LC50)	LD50 390 - 543 mg/m ³ , Inhalation, Rat
ATE inhalation (dusts/mists mg/l)	1.5
Skin corrosion/irritation	
Animal data	Slightly irritating. Rabbit
Serious eye damage/irritation	Slightly irritating. Rabbit
Respiratory sensitisation	
Respiratory sensitisation	Not sensitising. Guinea pig
Skin sensitisation	
Skin sensitisation	Sensitising. Guinea pig

Germ cell mutagenicity	
Genotoxicity - in vitro	Gene mutation: Negative.
Carcinogenicity	
Carcinogenicity	No information available
Reproductive toxicity	
Reproductive toxicity - fertility	No information available.
Specific target organ toxicity - single exposure	
STOT - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	NOAEL 3.3 mg/m ³ , Inhalation, Rat
Aspiration hazard	
Aspiration hazard	Based on available data the classification criteria are not met.
Inhalation	Harmful if inhaled. Irritating to respiratory system.
Ingestion	May cause discomfort if swallowed.
Skin contact	May cause an allergic skin reaction. Prolonged skin contact may cause temporary irritation.
Eye contact	May cause temporary eye irritation.
HEXAMETHYLENE DIISOCYANATE	
Acute toxicity - oral	
Notes (oral LD50)	LD50 959 mg/kg, Oral, Rat OECD 401 Harmful if swallowed.
ATE oral (mg/kg)	500.0
Acute toxicity - dermal	
Notes (dermal LD50)	LD50 >7000 mg/kg, Dermal, Rat OECD 402
Acute toxicity - inhalation	
Acute toxicity inhalation (LC50 vapours mg/l)	0.124
Notes (inhalation LC50)	LC50 0.124 mg/l, Inhalation, Rat OECD 403 Fatal if inhaled.
ATE inhalation (vapours mg/l)	0.124
Skin corrosion/irritation	
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory sensitisation	
Respiratory sensitisation	Sensitising. Guinea pig May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitisation	
Skin sensitisation	Sensitising. Guinea pig OECD 406 May cause an allergic skin reaction.
Germ cell mutagenicity	
Genotoxicity - in vitro	Bacterial reverse mutation test: Negative. OECD 471 Gene mutation: Negative.
Genotoxicity - in vivo	Chromosome aberration: Negative. OECD 474
Carcinogenicity	
Carcinogenicity	No evidence of carcinogenicity in animal studies.
Reproductive toxicity	
Reproductive toxicity -fertility	Screening - NOAEL 0.3 ppm, Inhalation, Rat P Screening - NOAEL 0.3 ppm, Inhalation, Rat F1 OECD 422

Specific target organ toxicity - single exposure	
STOT - single exposure	No information available.
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	NOAEL =0.005 ppm, Inhalation, Rat OECD 453 May cause respiratory system irritation.
Aspiration hazard	
Aspiration hazard	No information available.
Inhalation	Fatal if inhaled. May cause sensitisation by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation.
Ingestion	Harmful if swallowed.
Skin contact	Causes skin irritation. May cause an allergic skin reaction. May cause sensitisation by skin contact.
Eye contact	Causes serious eye irritation.

SECTION 12: Ecological information

Ecotoxicity	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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Ecological information on ingredients.

HEXAMETHYLENE DIISOCYANATE OLIGOMERS ISOCYANATE TYPE

Ecotoxicity	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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HEXAMETHYLENE DIISOCYANATE

Ecotoxicity	The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects on the environment.
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12.1. Toxicity

Acute aquatic toxicity	
Acute toxicity - fish	LC0, 96 hours: > 100 mg/l, Brachydanio rerio (Zebra Fish)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 127 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC50, 72 hours: >1000 mg/l, Desmodosmus subspicatus
Acute toxicity - microorganisms	EC50, 3 hours: 3828 mg/l, Activated sludge

Ecological information on ingredients.

HEXAMETHYLENE DIISOCYANATE OLIGOMERS ISOCYANATE TYPE

Acute aquatic toxicity	
Acute toxicity - fish	LC0, 96 hours: > 100 mg/l, Brachydanio rerio (Zebra Fish)
Acute toxicity - aquatic invertebrates	EC50, 48 hours: 127 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC50, 72 hours: >1000 mg/l, Scenedesmus subspicatus
Acute toxicity - microorganisms	EC50, 3 hours: 3828 mg/l, Activated sludge

HEXAMETHYLENE DIISOCYANATE

Toxicity	No information available.
Acute aquatic toxicity	
Acute toxicity - fish	LC50, 96 hours: >82.8 mg/l, Brachydanio rerio (Zebra Fish)
Acute toxicity - aquatic invertebrates	EC50, 48 hours: >89.1 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC50, 72 hours: >77.4 mg/l, Scenedesmus subspicatus NOEC, 72 hours: 11.7 mg/l, Scenedesmus subspicatus
Acute toxicity - microorganisms	EC50, 3 hours: 842 mg/l, Activated sludge

12.2. Persistence and degradability	
Persistence and degradability	The product is not readily biodegradable.
Phototransformation	Air - Half-life, DT50 : 2.98 hours
Stability (hydrolysis)	- Half-life, DT50 : ~ 7.7 hours @ 23°C
Biodegradation	Water - Degradation (%) 1%: 28 days OECD 301D
Ecological information on ingredients.	
HEXAMETHYLENE DIISOCYANATE OLIGOMERS ISOCYANATE TYPE	
Persistence and degradability	The product is not readily biodegradable.
Biodegradation	- Degradation (%) 1%: 28 days
HEXAMETHYLENE DIISOCYANATE	
Persistence and degradability	The product is not readily biodegradable.
Biodegradation	- Degradation 42%: OECD 301F
12.3. Bioaccumulative potential	
Bioaccumulative potential	Bioaccumulation is unlikely. BCF: 141 l/kg
Partition coefficient	log Pow: 9.81 Calculation method.
Ecological information on ingredients.	
HEXAMETHYLENE DIISOCYANATE OLIGOMERS ISOCYANATE TYPE	
Bioaccumulative potential	Bioaccumulation is unlikely.
Partition coefficient	No information available.
HEXAMETHYLENE DIISOCYANATE	
Bioaccumulative potential	BCF: 57.6,
Partition coefficient	log Pow: 3.20
12.4. Mobility in soil	
Mobility	Hydrolytically unstable.
Adsorption/desorption coefficient	- Log Koc: 6.266 @ 25°C
Henry's law constant	1.3 x 10 ⁻¹² Pa m ³ /mol @ 25°C
Ecological information on ingredients.	
HEXAMETHYLENE DIISOCYANATE OLIGOMERS ISOCYANATE TYPE	
Mobility	Immiscible with water.
HEXAMETHYLENE DIISOCYANATE	
Mobility	No information available.
12.5. Results of PBT and vPvB assessment	
Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current EU criteria.
Ecological information on ingredients.	
HEXAMETHYLENE DIISOCYANATE OLIGOMERS ISOCYANATE TYPE	
Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current EU criteria.
HEXAMETHYLENE DIISOCYANATE	
Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current EU criteria.
12.6. Other adverse effects	
Other adverse effects	No information available.
Ecological information on ingredients.	
HEXAMETHYLENE DIISOCYANATE OLIGOMERS ISOCYANATE TYPE	
Other adverse effects	No information available.

HEXAMETHYLENE DIISOCYANATE	
Other adverse effects	None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Waste is classified as hazardous waste. Do not puncture or incinerate, even when empty. Do not close container tightly, due to the risk of excessive pressure build-up. Avoid discharge into drains or watercourses or onto the ground. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).
14.1. UN number	Not applicable.
14.2. UN proper shipping name	Not applicable.
14.3. Transport hazard class(es)	Not applicable.
14.4. Packing group	Not applicable.
14.5. Environmental hazards	
Environmentally hazardous substance/marine pollutant	No.
14.6. Special precautions for user	Not applicable.
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Commission Regulation (EU) No 2015/830 of 28 May 2015.
Restrictions (Annex XVII Regulation 1907/2006)	CAUTION - Chemical may be subject to REACH RESTRICTIONS - see Annex XVII. This product is/contains a substance that is included in REGULATION (EC) No 1907/2006 (REACH) ANNEX XVII - RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES. Entry number: 3

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	<p>ATE: Acute Toxicity Estimate.</p> <p>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</p> <p>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</p> <p>CAS: Chemical Abstracts Service.</p> <p>DNEL: Derived No Effect Level.</p> <p>IATA: International Air Transport Association.</p> <p>IMDG: International Maritime Dangerous Goods.</p> <p>Kow: Octanol-water partition coefficient.</p> <p>LC50: Lethal Concentration to 50 % of a test population.</p> <p>LD50: Lethal Dose to 50% of a test population (Median Lethal Dose).</p> <p>PBT: Persistent, Bioaccumulative and Toxic substance.</p> <p>PNEC: Predicted No Effect Concentration.</p> <p>REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.</p> <p>RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.</p> <p>vPvB: Very Persistent and Very Bioaccumulative.</p> <p>IARC: International Agency for Research on Cancer.</p> <p>MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.</p> <p>cATpE: Converted Acute Toxicity Point Estimate.</p> <p>BCF: Bioconcentration Factor.</p> <p>BOD: Biochemical Oxygen Demand.</p> <p>EC50: 50% of maximal Effective Concentration.</p> <p>LOAEC: Lowest Observed Adverse Effect Concentration.</p> <p>LOAEL: Lowest Observed Adverse Effect Level.</p> <p>NOAEC: No Observed Adverse Effect Concentration.</p> <p>NOAEL: No Observed Adverse Effect Level.</p> <p>NOEC: No Observed Effect Concentration.</p> <p>LOEC: Lowest Observed Effect Concentration.</p> <p>DMEL: Derived Minimal Effect Level.</p> <p>EL50: Exposure Limit 50</p> <p>hPa: Hectopascal</p> <p>LL50: Lethal Loading fifty</p> <p>OECD: Organisation for Economic Co-operation and Development</p> <p>POW: Octanol-water partition coefficient</p> <p>SCBA: self-contained breathing apparatus</p> <p>STP: Sewage Treatment Plant</p> <p>VOC: Volatile Organic Compounds</p>
Classification abbreviations and acronyms	<p>Acute Tox. = Acute toxicity</p> <p>Aquatic Acute = Hazardous to the aquatic environment (acute)</p> <p>Aquatic Chronic = Hazardous to the aquatic environment (chronic)</p>
Key literature references and sources for data	Supplier's information.
Revision comments	This is the first issue.
Revision date	24/09/2020
Version number	1.000
SDS number	60878
SDS status	Approved.

Hazard statements in full	H302 Harmful if swallowed. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H331 Toxic if inhaled. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation.
Signature	Jacq Pattinson
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