

### SAFETY DATA SHEET Permabond UV620

SECTION 1: Identification of the	ne substance/mixture and of the company/undertaking
1.1. Product identifier	
Product name	Permabond UV620
1.2. Relevant identified uses o	f the substance or mixture and uses advised against
Identified uses	Adhesive.
1.3. Details of the supplier of t	he safety data sheet
Supplier	Permabond Engineering Adhesives GmbH Niederkasseler Lohweg 18 40547 Düsseldorf Germany info.europe@permabond.com
Manufacturer	Permabond Engineering Adhesives Ltd. Wessex Way Colden Common Winchester Hampshire SO21 1WP United Kingdom Tel: +44 (0)1962 711 661 Fax: +44 (0)1962 711 662 info@permabond.co.uk
1.4. Emergency telephone nur	nber
Emergency telephone	CHEMTREC UK: +(44)-870-8200418 CHEMTREC US: 800-424-9300 (CCN: 829878)
National emergency telephone number	CHEMTREC UK: +(44)-870-8200418 CHEMTREC US: 800-424-9300 CHEMTREC Australia: +(61)-290372994 CHEMTREC New Zealand: +(64)-98010034
SECTION 2: Hazards identification	ation
2.1. Classification of the subst	ance or mixture
Classification (EC 1272/2008)	Not Classified
Physical hazards	Not Classified
Health hazards	Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 STOT SE 3 - H335
Environmental hazards	Aquatic Chronic 2 - H411
2.2. Label elements	
Hazard pictograms	

Signal word

Hazard statements	H315 Causes skin irritation. H319 Causes serious eye irritation. H317 May cause an allergic skin reaction. H335 May cause respiratory irritation. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	<ul> <li>P273 Avoid release to the environment.</li> <li>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</li> <li>P302+P352a IF ON SKIN: Wash with plenty of soap and water</li> <li>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P308+P313 IF exposed or concerned: Get medical advice/ attention.</li> </ul>
Contains	2-HYDROXYETHYL METHACRYLATE, ISOBORNYL ACRYLATE, ACRYLIC ACID, DIPHENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINE OXIDE
Supplementary precautionary statements	<ul> <li>P264 Wash contaminated skin thoroughly after handling.</li> <li>P271 Use only outdoors or in a well-ventilated area.</li> <li>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</li> <li>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</li> <li>P337+P313 If eye irritation persists: Get medical advice/ attention.</li> <li>P362+P364 Take off contaminated clothing and wash it before reuse.</li> <li>P391 Collect spillage.</li> <li>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</li> <li>P501 Dispose of contents/container in accordance with existing Community, National and local regulations.</li> </ul>

#### 2.3. Other hazards

Skin Sens. 1 - H317

None under normal conditions. This substance is not classified as PBT or vPvB according to current EU criteria.

### SECTION 3: Composition/information on ingredients

3.2. Mixtures		
2-HYDROXYETHYL METHACR	YLATE	10-30%
CAS number: 868-77-9	EC number: 212-782-2	REACH registration number: 01- 2119490169-29-XXXX
Classification		
Skin Irrit. 2 - H315		
Eye Irrit. 2 - H319		

ISOBORNYL ACRYLATE		10-30%
CAS number: 5888-33-5	EC number: 227-561-6	REACH registration number: 01- 2119957862-25-XXXX
M factor (Acute) = 1	M factor (Chronic) = 1	
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 STOT SE 3 - H335 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410		
ACRYLIC ACID		1-3%
CAS number: 79-10-7	EC number: 201-177-9	REACH registration number: 01- 2119452449-31-XXXX
M factor (Acute) = 1		
<b>Classification</b> Flam. Liq. 3 - H226 Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Corr. 1A - H314 Eye Dam. 1 - H318 STOT SE 3 - H335 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411		
DIPHENYL(2,4,6-TRIMETH OXIDE	YLBENZOYL)PHOSPHINE	1-<3%
CAS number: 75980-60-8	EC number: 278-355-8	REACH registration number: 01- 2119972295-29-XXXX
<b>Classification</b> Skin Sens. 1B - H317 Repr. 2 - H361f Aquatic Chronic 2 - H411		
The full text for all hazard sta	tements is displayed in Section 16.	
SECTION 4: First aid measur	es	
4.1. Description of first aid me	easures	
Inhalation	Move the exposed person to fresh air. Get m	nedical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Give plea medical attention if any discomfort continues	nty of water to drink. Do not induce vomiting. Get
Skin contact	Remove contaminated clothing. Wash skin the develop, obtain medical attention	horoughly with soap and water. If symptoms

Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Get medical attention if any discomfort continues.	
4.2. Most important symptoms	and effects, both acute and delayed	
Inhalation	May cause respiratory system irritation.	
Skin contact	Skin irritation. Mild dermatitis, allergic skin rash.	
Eye contact	Irritating and may cause redness and pain.	
4.3. Indication of any immediat	e medical attention and special treatment needed	
Notes for the doctor	No specific recommendations. Treat symptomatically.	
SECTION 5: Firefighting meas	ures	
5.1. Extinguishing media		
Suitable extinguishing media	Extinguish with 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 fro	om the substance or mixture	
Hazardous combustion products	Burning produces irritating, toxic and obnoxious fumes. Carbon monoxide, carbon dioxide, and unknown hydrocarbons.	
5.3. Advice for firefighters		
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.	
SECTION 6: Accidental release measures		
SECTION 6: Accidental releas	e measures	
	e measures tective equipment and emergency procedures	
6.1. Personal precautions, prot	<b>Acctive equipment and emergency procedures</b> Wear protective clothing as described in Section 8 of this safety data sheet.	
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<ul><li>6.1. Personal precautions, prof</li><li>Personal precautions</li><li>6.2. Environmental precautions</li></ul>	tective equipment and emergency procedures Wear protective clothing as described in Section 8 of this safety data sheet. Do not discharge into drains or watercourses or onto the ground.	
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<ul> <li>6.1. Personal precautions, prof Personal precautions</li> <li>6.2. Environmental precautions</li> <li>6.2. Environmental precautions</li> <li>6.3. Methods and material for of Methods for cleaning up</li> <li>6.4. Reference to other section Reference to other sections</li> <li>SECTION 7: Handling and stor</li> <li>7.1. Precautions for safe handle</li> <li>Usage precautions</li> <li>7.2. Conditions for safe storage</li> </ul>	tective equipment and emergency procedures         Wear protective clothing as described in Section 8 of this safety data sheet.         S         Do not discharge into drains or watercourses or onto the ground.         containment and cleaning up         Absorb spillage with sand or other inert absorbent. Transfer to suitable, labelled containers for disposal.         Is         For personal protection, see Section 8. For waste disposal, see section 13.         rage         ling         Use in a well ventilated area. Avoid contact with skin and eyes. Do not ingest or inhale. Do not eat, drink or smoke when using this product.         e, including any incompatibilities         Store in closed original container at temperatures between 5°C and 25°C. Protect against	

#### SECTION 8: Exposure controls/Personal protection

#### 8.1. Control parameters

### 2-HYDROXYETHYL METHACRYLATE (CAS: 868-77-9)

DNEL	Workers, Industry - Inhalation; Long term systemic effects: 4.9 mg/m³ Workers, Industry - Dermal; Long term systemic effects: 1.3 mg/kg/day
PNEC	Workers, Industry - Water; Long term 0.482 mg/l Workers, Industry - Soil; Long term 0.476 mg/kg Workers, Industry - STP; Long term 10 mg/l Workers, Industry - Fresh water; 3.79 mg/kg
	ISOBORNYL ACRYLATE (CAS: 5888-33-5)
DNEL	Workers - Dermal; Long term systemic effects: 1.39 mg/kg/day
PNEC	Fresh water; 0.001 mg/l marine water; 0 mg/l STP; 2 mg/l Sediment (Freshwater); 0.145 mg/kg Sediment (Marinewater); 0.015 mg/kg
	ACRYLIC ACID (CAS: 79-10-7)
DNEL	Workers - Inhalation; Long term local effects: 30 mg/m <sup>3</sup> Workers - Dermal; Short term local effects: 1 mg/cm <sup>2</sup>
PNEC	Fresh water; 0.003 mg/l Intermittent release; 0.001 mg/l marine water; 0 mg/l STP; 0.9 mg/l Sediment (Freshwater); 0.024 mg/kg/day Sediment (Marinewater); 0.002 mg/kg/day
DIPHEN	YL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINE OXIDE (CAS: 75980-60-8)
DNEL	Workers - Inhalation; Long term systemic effects: 3.5 mg/m³ Workers - Dermal; Long term systemic effects: 1 mg/kg/day
PNEC	Fresh water; 0.004 mg/l marine water; 0 mg/l Sediment (Freshwater); 0.29 mg/kg Sediment (Marinewater); 0.029 mg/kg Soil; 0.056 mg/kg STP; >1000 mg/l

#### 8.2. Exposure controls

### Protective equipment





Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection	The following protection should be worn: Chemical splash goggles or face shield. Personal eye protection should conform to EN 166
Hand protection	It is recommended that chemical-resistant, impervious gloves are worn. Gloves should conform to EN 374. For exposure up to 4 hours, wear gloves made of the following material: Nitrile rubber. Thickness: $\geq 0.4$ mm The selected gloves should have a breakthrough time of at least 0.5 hours. For exposure up to 8 hours, wear gloves made of the following material: Nitrile rubber. Thickness: $\geq 0.4$ mm The selected gloves should have a breakthrough time of at least 8 hours. The breakthrough time for any glove material may be different for different glove manufacturers. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the gloves are retaining their protective properties and change them as soon as any deterioration is detected.
Other skin and body protection	Employee must wear appropriate protective clothing and equipment to prevent any possibility of skin contact with this substance.
Hygiene measures	Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke. Use of good industrial hygiene practices is required.
Respiratory protection	Ensure adequate ventilation of the working area. Not available. Respiratory protection may be required if excessive airborne contamination occurs. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Organic vapour filter. Type A. (EN14387)

### SECTION 9: Physical and chemical properties

9.1. Information on basic phys	ical and chemical properties
Appearance	Liquid.
Colour	Colourless.
Odour	Acrylic
Odour threshold	Not available.
рН	Not relevant.
Melting point	Not available.
Initial boiling point and range	Not applicable.
Flash point	>100°C
Evaporation rate	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	1.0
Solubility(ies)	Slightly soluble in water.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Viscosity	≈2500 mPa s @ 23°C

Species

# Permabond UV620

Oxidising properties	Not available.	
9.2. Other information		
Other information	Not relevant.	
SECTION 10: Stability and re	activity	
10.1. Reactivity		
Reactivity	The following materials may react with the product: Strong oxidising agents.	
10.2. Chemical stability		
Stability	Stable at normal ambient temperatures.	
10.3. Possibility of hazardous	reactions	
Possibility of hazardous reactions	There are no known reactivity hazards associated with this product.	
10.4. Conditions to avoid		
Conditions to avoid	Protect against direct sunlight.	
10.5. Incompatible materials		
Materials to avoid	Strong reducing agents. Strong oxidising agents.	
10.6. Hazardous decompositi	on products	
Hazardous decomposition products	Thermal decomposition could produce carbon monoxide, carbon dioxide, and unidentified organic compounds.	
SECTION 11: Toxicological information		
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SECTION 11: Toxicological ir 11.1. Information on toxicolog		
11.1. Information on toxicolog	<b>jical effects</b> The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the	
11.1. Information on toxicolog Toxicological effects Skin sensitisation	<b>jical effects</b> The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.	
11.1. Information on toxicolog Toxicological effects Skin sensitisation Skin sensitisation Aspiration hazard	<b>jical effects</b> The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.	
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11.1. Information on toxicolog         Toxicological effects         Skin sensitisation         Skin sensitisation         Aspiration hazard         Aspiration hazard         Inhalation	<b>jical effects</b> The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following. May cause sensitisation by skin contact. None under normal conditions. May cause respiratory system irritation.	
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Rat

Acute toxicity - dermal		
Acute toxicity dermal (LD₅ mg/kg)	5,000.0	
Species	Rabbit	
Acute toxicity - inhalation		
Notes (inhalation LC₅₀)	No information available.	
Skin corrosion/irritation		
Animal data	Erythema/eschar score: Very slight erythema - barely perceptible (1). Not irritating.	
Serious eye damage/irritati	on	
Serious eye damage/irritation	Moderately irritating.	
Respiratory sensitisation		
Respiratory sensitisation	No information available.	
Skin sensitisation		
Skin sensitisation	Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.	
Germ cell mutagenicity		
Genotoxicity - in vitro	Conclusive data but not sufficient for classification.	
Genotoxicity - in vivo	Chromosome aberration: Negative.	
Carcinogenicity		
Carcinogenicity	No specific test data are available.	
Reproductive toxicity		
Reproductive toxicity - fertility	Screening - NOAEL >=1000 mg/kg/day, Oral, Rat F1	
Reproductive toxicity - development	Developmental toxicity: - NOAEL: >=1000 mg/kg/day, Oral, Rat	
Specific target organ toxicit	y - single exposure	
STOT - single exposure	No specific test data are available.	
Specific target organ toxicity - repeated exposure		
STOT - repeated exposure	No specific test data are available.	
Aspiration hazard		
Aspiration hazard	Not applicable.	
	ISOBORNYL ACRYLATE	
Acute toxicity - oral		
Acute toxicity oral (LD₅₀ mg/kg)	5,000.0	
Species	Rat	
Acute toxicity - dermal		

Acute toxicity dermal (LD₅₀ mg/kg)	3,000.0
Species	Rabbit
Acute toxicity - inhalation	
Notes (inhalation LC₅₀)	No information available.
Skin corrosion/irritation	
Skin corrosion/irritation	Not irritating.
Serious eye damage/irritatio	on
Serious eye damage/irritation	Not irritating.
Skin sensitisation	
Skin sensitisation	Local Lymph Node Assay (LLNA) - : Sensitising.
Germ cell mutagenicity	
Genotoxicity - in vitro	Genome mutation: Negative.
Carcinogenicity	
Carcinogenicity	No information available.
Reproductive toxicity	
Reproductive toxicity - fertility	Two-generation study - NOEC 0.092 mg/l, Inhalation, Rat P
Reproductive toxicity - development	Developmental toxicity: - NOAEL: 500 mg/kg/day, Oral, Rat
Specific target organ toxicit	y - single exposure
STOT - single exposure	No information available.
Specific target organ toxicit	y - repeated exposure
STOT - repeated exposure	No information available.
Aspiration hazard	
Aspiration hazard	No information available.
	ACRYLIC ACID
Acute toxicity - oral	
Acute toxicity oral (LD₅₀ mg/kg)	1,405.0
Species	Rat
Acute toxicity - dermal	
Acute toxicity dermal (LD₅₀ mg/kg)	2,000.0
Species	Rabbit
Acute toxicity - inhalation	
Acute toxicity inhalation (LC∞ dust/mist mg/l)	3.6

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Species	Rat	
Skin corrosion/irritation		
Animal data	Rabbit Highly corrosive.	
Serious eye damage/irritation		
Serious eye damage/irritation	Rabbit Corrosive	
Skin sensitisation		
Skin sensitisation	Not sensitising.	
Germ cell mutagenicity		
Genotoxicity - in vitro	Gene mutation: Negative.	
Genotoxicity - in vivo	Chromosome aberration: Negative.	
Carcinogenicity		
Carcinogenicity	NOAEL >=78 mg/kg/day, Oral, Rat	
IARC carcinogenicity	IARC Group 3 Not classifiable as to its carcinogenicity to humans.	
Reproductive toxicity		
Reproductive toxicity - fertility	- NOAEL 460 mg/l, Oral, Rat P, F1	
Reproductive toxicity - development	Fetotoxicity: - NOAEC: >= 0.673 mg/l, Inhalation, Rabbit	
Specific target organ toxicit	y - single exposure	
STOT - single exposure	No information available.	
Specific target organ toxicit	y - repeated exposure	
STOT - repeated exposure	No information available.	
Aspiration hazard		
Aspiration hazard	Not available.	
DI	PHENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINE OXIDE	
Acute toxicity - oral		
Acute toxicity oral (LD₅₀ mg/kg)	5,000.0	
Species	Rat	
Acute toxicity - dermal		
Acute toxicity dermal (LD₅₀ mg/kg)	2,000.1	
Species	Rat	
Acute toxicity - inhalation		
Notes (inhalation LC₅₀)	No information available.	
Skin corrosion/irritation		
Skin corrosion/irritation	Not irritating.	

	Serious eye damage/irritation	
	Serious eye damage/irritation	Not irritating.
	Skin sensitisation	
	Skin sensitisation	Local Lymph Node Assay (LLNA) - Mouse: Sensitising.
	Germ cell mutagenicity	
	Genotoxicity - in vitro	Gene mutation: Negative.
	Carcinogenicity	
	Carcinogenicity	No data available.
	Reproductive toxicity	
	Reproductive toxicity - fertility	Possible risk of adverse reproductive effects.
	Reproductive toxicity - development	Developmental toxicity: - NOAEL: 150 mg/kg, Oral, Rat
	Specific target organ toxic	ity - single exposure
	STOT - single exposure	No information available.
	Specific target organ toxic	ity - repeated exposure
	STOT - repeated exposure	e NOAEL 50 mg/kg/day, Oral, Rat
	Aspiration hazard	
	Aspiration hazard	No data available.
SECTION 2	Aspiration hazard	No data available.
SECTION <sup>2</sup> Ecotoxicity	12: Ecological information	No data available.
	12: Ecological information Toxic to	
Ecotoxicity	I2: Ecological information Toxic to ity The mix defined Annex I	
Ecotoxicity 12.1. Toxic Toxicity	I2: Ecological information Toxic to ity The mix defined Annex I	o aquatic life with long lasting effects. Ature is classified based on the available hazard information for the ingredients as in the classification criteria for mixtures for each hazard class or differentiation in I to Regulation 1272/2008/EC. Relevant available health/ecological information for the
Ecotoxicity 12.1. Toxic Toxicity	I2: Ecological information Toxic to ity The min defined Annex I substar	o aquatic life with long lasting effects. Ature is classified based on the available hazard information for the ingredients as in the classification criteria for mixtures for each hazard class or differentiation in I to Regulation 1272/2008/EC. Relevant available health/ecological information for the
Ecotoxicity 12.1. Toxic Toxicity	I2: Ecological information Toxic to ity The min defined Annex I substar	o aquatic life with long lasting effects. Acture is classified based on the available hazard information for the ingredients as in the classification criteria for mixtures for each hazard class or differentiation in I to Regulation 1272/2008/EC. Relevant available health/ecological information for the inces listed under Section 3 is provided in the following.
Ecotoxicity 12.1. Toxic Toxicity	I2: Ecological information Toxic to ity The mix defined Annex I substar	o aquatic life with long lasting effects. Acture is classified based on the available hazard information for the ingredients as in the classification criteria for mixtures for each hazard class or differentiation in I to Regulation 1272/2008/EC. Relevant available health/ecological information for the inces listed under Section 3 is provided in the following.
Ecotoxicity 12.1. Toxic Toxicity	12: Ecological information Toxic to ity The mix defined Annex I substar	a aquatic life with long lasting effects. Ature is classified based on the available hazard information for the ingredients as in the classification criteria for mixtures for each hazard class or differentiation in to Regulation 1272/2008/EC. Relevant available health/ecological information for the inces listed under Section 3 is provided in the following. <b>2-HYDROXYETHYL METHACRYLATE</b>
Ecotoxicity 12.1. Toxic Toxicity	12: Ecological information Toxic to ity The min defined Annex I substar Information on ingredients. Acute aquatic toxicity Acute toxicity - fish Acute toxicity - aquatic	b aquatic life with long lasting effects. Ature is classified based on the available hazard information for the ingredients as in the classification criteria for mixtures for each hazard class or differentiation in 1 to Regulation 1272/2008/EC. Relevant available health/ecological information for the inces listed under Section 3 is provided in the following. <b>2-HYDROXYETHYL METHACRYLATE</b> LC <sub>50</sub> , 96 hours: > 100 mg/l, Oryzias latipes (Red killifish)
Ecotoxicity 12.1. Toxic Toxicity	12: Ecological information Toxic to ity The mix defined Annex I substar Information on ingredients. Acute aquatic toxicity Acute toxicity - fish Acute toxicity - aquatic invertebrates Acute toxicity - aquatic	<ul> <li>aquatic life with long lasting effects.</li> <li>aquatic life with long lasting effects.</li> <li>acture is classified based on the available hazard information for the ingredients as in the classification criteria for mixtures for each hazard class or differentiation in long to Regulation 1272/2008/EC. Relevant available health/ecological information for the nees listed under Section 3 is provided in the following.</li> <li><u>2-HYDROXYETHYL METHACRYLATE</u></li> <li>LC<sub>50</sub>, 96 hours: &gt; 100 mg/l, Oryzias latipes (Red killifish)</li> <li>EC<sub>50</sub>, 48 hours: 380 mg/l, Daphnia magna</li> <li>EC<sub>50</sub>, 72 hours: 836 mg/l, Selenastrum capricornutum</li> </ul>

Chronic toxicity - aquatic	NOEC, 21 days: 24.1 mg/l, Daphnia magna
invertebrates	

#### **ISOBORNYL ACRYLATE**

Acute aquatic toxicity	
LE(C)₅₀	$0.1 < L(E)C50 \le 1$
M factor (Acute)	1
Acute toxicity - fish	LC₅₀, 96 hours: 0.704 mg/l, Danio rerio (Zebrafish)
Acute toxicity - aquatic plants	EC₅₀, 72 hours: 1.98 mg/l, Pseudokirchneriella subcapitata NOEC, 72 hours: 0.405 mg/l, Pseudokirchneriella subcapitata
Chronic aquatic toxicity	
M factor (Chronic)	1
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 0.092 mg/l, Daphnia magna

### ACRYLIC ACID

Acute aquatic toxicity
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LE(C)50	0.1 < L(E)C50 ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC₅₀, 96 hours: 222 mg/l, Brachydanio rerio (Zebra Fish)
Acute toxicity - aquatic invertebrates	LC₅₀, 24 hours: 270 mg/l, Daphnia magna EC₅₀, 48 hours: 95 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC₅₀, 72 hours: 0.04 mg/l, Desmodesmus subspicatus EC₅₀, 96 hours: 0.17 mg/l, Pseudokirchneriella subcapitata
Acute toxicity - microorganisms	EC <sub>20</sub> , 30 minutes: 900 mg/l, Activated sludge
Chronic aquatic toxicity	
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 19 mg/l, Daphnia magna

### DIPHENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINE OXIDE

Acute aquatic toxicity	
Acute toxicity - fish	LC₅₀, 48 hours: 6.53 mg/l, Oryzias latipes (Red killifish)
Acute toxicity - aquatic invertebrates	EC₅₀, 48 hours: 3.53 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC₅₀, 72 hours: > 2.01 mg/l, Pseudokirchneriella subcapitata
Acute toxicity - microorganisms	EC₅₀, 180 minutes: > 1000 mg/l, Activated sludge

#### 12.2. Persistence and degradability

Persistence and degradability No data available.

Ecological information on ingredients.

	2-HYDROXYETHYL METHACRYLATE
Biodegradation W	ater - Degradation 84%: 28 days
	ISOBORNYL ACRYLATE
Biodegradation W	ater - Degradation 57%: 28 days
	ACRYLIC ACID
Biodegradation W	ater - Degradation 81%: 28 days
DIPH	ENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINE OXIDE
Biodegradation W	ater - Degradation < 20%: 28 days
12.3. Bioaccumulative potential	
Bioaccumulative potential No data ava	ailable on bioaccumulation.
Partition coefficient Not availabl	e.
Ecological information on ingredients.	
	2-HYDROXYETHYL METHACRYLATE
Bioaccumulative potential Bo	CF: 1.34 - 1.54,
	ACRYLIC ACID
Partition coefficient log	g Kow: 0.46
DIPH	ENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINE OXIDE
Bioaccumulative potential B0	CF: 23 - 55, Cyprinus carpio (Common carp)
12.4. Mobility in soil	
Mobility No data ava	ailable.
Ecological information on ingredients.	
	2-HYDROXYETHYL METHACRYLATE
Adsorption/desorption W coefficient	/ater - Koc: 42.7 @ 20°C
	ACRYLIC ACID
Surface tension 69	9.6 mN/m @ 20°C
12.5. Results of PBT and vPvB assessment	t i i i i i i i i i i i i i i i i i i i
Results of PBT and vPvB This substates assessment	- nce is not classified as PBT or vPvB according to current EU criteria.
12.6. Other adverse effects	
Other adverse effects None known	n.

#### SECTION 13: Disposal considerations

13.1. Waste treatment met	hods
General information	Waste disposal should be in accordance with existing Community, National and local regulations Empty containers may contain product residue; follow SDS and label warnings even after they have been emptied.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
Waste class	08 04 09* waste adhesives and sealants containing organic solvents or other dangerous substances.
SECTION 14: Transport information	
Dood transport potes	Applies only to inner containers >E litrae Cas CD 275
Road transport notes	Applies only to inner containers >5 litres. See SP 375
Sea transport notes	Applies only to inner containers >5 litres. See 2.10.2.7 of the IMDG code.

Air transport notes Applies only to inner containers >5 litres. See SP A197 (375)

14.1. UN number

3082

#### 14.2. UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Isobornyl Acrylate)

#### 14.3. Transport hazard class(es)

9

### Transport labels

14.4. Packing group

Ш

### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

Tunnel restriction code (E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable. Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

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

National regulations

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

EU legislation	<ul> <li>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16</li> <li>December 2008 on classification, labelling and packaging of substances and mixtures (as amended).</li> <li>COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)</li> </ul>
Guidance	Workplace Exposure Limits EH40. CHIP for everyone HSG228. Safety Data Sheets for Substances and Preparations. Approved Classification and Labelling Guide (Sixth edition) L131.

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information	
Revision date	02/11/2021
Revision	6
Supersedes date	03/07/2018
Hazard statements in full	<ul> <li>H226 Flammable liquid and vapour.</li> <li>H302 Harmful if swallowed.</li> <li>H312 Harmful in contact with skin.</li> <li>H314 Causes severe skin burns and eye damage.</li> <li>H315 Causes skin irritation.</li> <li>H317 May cause an allergic skin reaction.</li> <li>H318 Causes serious eye damage.</li> <li>H319 Causes serious eye irritation.</li> <li>H332 Harmful if inhaled.</li> <li>H335 May cause respiratory irritation.</li> <li>H361f Suspected of damaging fertility.</li> <li>H400 Very toxic to aquatic life.</li> <li>H410 Very toxic to aquatic life with long lasting effects.</li> <li>H411 Toxic to aquatic life with long lasting effects.</li> </ul>

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.