

Sicherheitsdatenblatt



Produkt: UV640

Hersteller: PERMABOND ENGINEERING ADHESIVES

Warengruppe: KLEBSTOFF

Artikelgruppe: UV- AUSHÄRTENDER KLEBSTOFF

Download: 29.03.2024

PERMABOND UV640

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SAFETY DATA SHEET

Permabond UV640

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

1.1. Product identifier

Product name Permabond UV640

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

Identified uses Adhesive.

1.3. Details of the supplier of the safety data sheet

Supplier 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.europe@permabond.com

1.4. Emergency telephone number

Emergency telephone CHEMTREC UK: +(44)-870-8200418 CHEMTREC US: 800-424-9300 (CCN: 829878)

National emergency telephone number CHEMTREC Ireland: +(353)-19014670
CHEMTREC Australia: +(61)-290372994
CHEMTREC New Zealand: +(64)-98010034

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 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Repr. 1B - H360D

Environmental hazards Aquatic Chronic 2 - H411

2.2. Label elements

Hazard pictograms



Signal word

Danger

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Hazard statements	H302 Harmful if swallowed. H315 Causes skin irritation. H318 Causes serious eye damage. H317 May cause an allergic skin reaction. H360D May damage the unborn child. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	P202 Do not handle until all safety precautions have been read and understood. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P302+P352a IF ON SKIN: Wash with plenty of soap and water P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 IF exposed or concerned: Get medical advice/ attention.
Contains	TETRAHYDROFURFURYL METHACRYLATE, ISOBORNYL ACRYLATE, N,N-DIMETHYLACRYLAMIDE, 2-HYDROXYETHYL METHACRYLATE
Supplementary precautionary statements	P264 Wash contaminated skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse. P391 Collect spillage. P405 Store locked up. P501 Dispose of contents/container in accordance with existing Community, National and local regulations.

2.3. Other hazards

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

TETRAHYDROFURFURYL METHACRYLATE			10-30%
CAS number: 2455-24-5	EC number: 219-529-5	REACH registration number: 01-2120748481-53-XXXX	
Classification Skin Sens. 1 - H317 Repr. 1B - H360D Aquatic Chronic 3 - H412			

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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			

N,N-DIMETHYLACRYLAMIDE			10-30%
CAS number: 2680-03-7	EC number: 220-237-5		
REACH registration exemption – < 1 tonne			
Classification Acute Tox. 3 - H301 Acute Tox. 3 - H311 Eye Dam. 1 - H318			

2-HYDROXYETHYL METHACRYLATE			5-10%
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 Skin Sens. 1 - H317			

DIPHENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINE OXIDE			1-<3%
CAS number: 75980-60-8	EC number: 278-355-8	REACH registration number: 01-2119972295-29-XXXX	
Classification Skin Sens. 1B - H317 Repr. 2 - H361f Aquatic Chronic 2 - H411			

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METHYL METHACRYLATE		<1%
CAS number: 80-62-6	EC number: 201-297-1	REACH registration number: 01-2119452498-28-XXXX
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 Skin Sens. 1 - H317 STOT SE 3 - H335		

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air. Get medical attention if any discomfort continues.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention.

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

Inhalation	High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.
Ingestion	Harmful if swallowed.
Skin contact	Skin irritation. Mild dermatitis, allergic skin rash.
Eye contact	May cause serious eye damage.

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

Notes for the doctor	No specific recommendations. Treat symptomatically.
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SECTION 5: Firefighting measures

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 from the substance or mixture

Hazardous combustion products	Burning produces irritating, toxic and obnoxious fumes. Carbon monoxide, carbon dioxide, and unknown hydrocarbons.
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5.3. Advice for firefighters

Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb spillage with sand or other inert absorbent. Transfer to suitable, labelled containers for disposal.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with skin and eyes. Do not ingest or inhale. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in closed original container at temperatures between 5°C and 25°C. Protect against direct sunlight. Never return unused material to storage receptacle.

7.3. Specific end use(s)

Specific end use(s) Adhesive.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

METHYL METHACRYLATE

Long-term exposure limit (8-hour TWA): WEL 50 ppm 208 mg/m³

Short-term exposure limit (15-minute): WEL 100 ppm 416 mg/m³

WEL = Workplace Exposure Limit

TETRAHYDROFURFURYL METHACRYLATE (CAS: 2455-24-5)

DNEL	Workers - Inhalation; Long term systemic effects: 3.53 mg/m ³ Workers - Dermal; Long term systemic effects: 1 mg/kg/day
PNEC	Fresh water; 0.347 mg/l marine water; 0.035 mg/l Sediment (Freshwater); 2.12 mg/kg Sediment (Marinewater); 0.212 mg/kg Soil; 0.221 mg/kg STP; 15.8 mg/l

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

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N,N-DIMETHYLACRYLAMIDE (CAS: 2680-03-7)

DNEL Workers - Inhalation; Long term systemic effects: 0.207 mg/m³
Workers - Dermal; Long term systemic effects: 357 µg/kg/day

PNEC Fresh water; 0.12 mg/l
marine water; 0.012 mg/l
STP; 18 mg/l
Sediment (Freshwater); 0.509 mg/kg
Sediment (Marinewater); 0.051 mg/kg
Soil; 0.031 mg/kg

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

DIPHENYL(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

METHYL METHACRYLATE (CAS: 80-62-6)

DNEL Workers, Industry/Professional - Inhalation; Long term : 208 mg/m³
Workers, Industry/Professional - Dermal; Long term : 13.67 mg/kg/day
Workers, Industry/Professional - Inhalation; Short term : 416 mg/m³

PNEC Workers, Industry/Professional - Water; Long term <0.94 mg/l

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust 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

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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: ≥ 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: ≥ 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/manufacture, who can provide information about the breakthrough time of the glove material. Considering the data specified by the glove manufacturer, check during use that 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. Use appropriate skin cream to prevent drying of skin. 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. 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 physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Acrylic
Odour threshold	Not available.
pH	Not relevant.
Melting point	Not available.
Initial boiling point and range	Not applicable.
Flash point	$>100^{\circ}\text{C}$
Evaporation rate	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	1.1
Solubility(ies)	Slightly soluble in water. Soluble in the following materials: Organic solvents.
Partition coefficient	Not applicable.
Auto-ignition temperature	Not available.
Viscosity	$\approx 16000 \text{ mPa s @ } 23^{\circ}\text{C}$ Thixotropic
Explosive properties	Not determined.

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Oxidising properties Not available.

9.2. Other information

Other information Not relevant.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity The following materials may react with the product: Strong oxidising agents. Light.

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 decomposition products

Hazardous decomposition products Thermal decomposition could produce carbon monoxide, carbon dioxide, and unidentified organic compounds.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects 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.

Skin sensitisation

Skin sensitisation May cause sensitisation by skin contact.

Reproductive toxicity

Reproductive toxicity - fertility Suspected of damaging fertility.

Reproductive toxicity - development May damage the unborn child.

Aspiration hazard

Aspiration hazard None under normal conditions.

Inhalation In high concentrations, vapours may irritate throat and respiratory system and cause coughing.

Ingestion Harmful if swallowed.

Skin contact Irritating to skin.

Eye contact Causes serious eye damage.

Toxicological information on ingredients.

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TETRAHYDROFURFURYL METHACRYLATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 4,000.0

Species Rat

Skin corrosion/irritation

Skin corrosion/irritation Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Not irritating.

Skin sensitisation

Skin sensitisation Sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Negative.

Carcinogenicity

Carcinogenicity No specific test data are available.

Reproductive toxicity

Reproductive toxicity - fertility Screening - NOAEL 120 mg/kg/day, Oral, Rat F1

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 300 mg/kg, Oral, Rat

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

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.

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Serious eye damage/irritation

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 toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

N,N-DIMETHYLACRYLAMIDE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 216.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 519.0

Species Rabbit

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 3.16

Species Rat

Skin corrosion/irritation

Animal data Method: OECD 404, Rabbit Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Method: OECD 405, Rabbit Causes serious eye damage.

Respiratory sensitisation

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Respiratory sensitisation No data available.

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation: Negative.

Genotoxicity - in vivo Chromosome aberration: Negative.

Carcinogenicity

Carcinogenicity No data available.

Reproductive toxicity

Reproductive toxicity - fertility Screening - NOAEL 30 mg/kg/day, Oral, Rat F1

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

2-HYDROXYETHYL METHACRYLATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ 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/irritation

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

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Genotoxicity - in vitro	Conclusive data but not sufficient for classification.
Genotoxicity - in vivo	Chromosome aberration: Negative.
<u>Carcinogenicity</u>	
Carcinogenicity	No specific test data are available.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Screening - NOAEL \geq 1000 mg/kg/day, Oral, Rat F1
Reproductive toxicity - development	Developmental toxicity: - NOAEL: \geq 1000 mg/kg/day, Oral, Rat
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	No specific test data are available.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	No specific test data are available.
<u>Aspiration hazard</u>	
Aspiration hazard	Not applicable.

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

<u>Acute toxicity - oral</u>	
Acute toxicity oral (LD₅₀ mg/kg)	5,000.0
Species	Rat
<u>Acute toxicity - dermal</u>	
Acute toxicity dermal (LD₅₀ mg/kg)	2,000.1
Species	Rat
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	No information available.
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Not irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Not irritating.
<u>Skin sensitisation</u>	
Skin sensitisation	Local Lymph Node Assay (LLNA) - Mouse: Sensitising.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Gene mutation: Negative.
<u>Carcinogenicity</u>	
Carcinogenicity	No data available.
<u>Reproductive toxicity</u>	

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Reproductive toxicity - fertility	Possible risk of adverse reproductive effects.
Reproductive toxicity - development	Developmental toxicity: - NOAEL: 150 mg/kg, Oral, Rat
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	No information available.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	NOAEL 50 mg/kg/day, Oral, Rat
<u>Aspiration hazard</u>	
Aspiration hazard	No data available.

METHYL METHACRYLATE

<u>Acute toxicity - oral</u>	
Acute toxicity oral (LD₅₀ mg/kg)	5,000.0
Species	Rat
<u>Acute toxicity - dermal</u>	
Acute toxicity dermal (LD₅₀ mg/kg)	5,000.0
Species	Rat
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ vapours mg/l)	29.8
Species	Rat
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Not irritating. Prolonged skin contact may cause temporary irritation.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Not irritating.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Mouse: Sensitising.
<u>Skin sensitisation</u>	
Skin sensitisation	Local Lymph Node Assay (LLNA) - Mouse: Sensitising.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Inconclusive.
Genotoxicity - in vivo	This substance has no evidence of mutagenic properties.
<u>Carcinogenicity</u>	
Carcinogenicity	CMR: no
IARC carcinogenicity	IARC Group 3 Not classifiable as to its carcinogenicity to humans.

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Reproductive toxicity

Reproductive toxicity - fertility No evidence of reproductive toxicity in animal studies.

Reproductive toxicity - development No evidence of reproductive toxicity in animal studies. non-teratogenic, not embryotoxic

Specific target organ toxicity - single exposure

Target organs Respiratory tract Irritation.

Specific target organ toxicity - repeated exposure

Target organs No specific target organs known.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

SECTION 12: Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

12.1. Toxicity

Toxicity 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.

Ecological information on ingredients.

TETRAHYDROFURFURYL METHACRYLATE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 34.7 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic plants EC₅₀, 72 hours: >100 mg/l, Desmodesmus subspicatus
NOEC, 72 hours: >100 mg/l, Desmodesmus subspicatus

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 37.2 mg/l, Daphnia magna

ISOBORNYL ACRYLATE

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 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

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N,N-DIMETHYLACRYLAMIDE

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: > 120 mg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: > 120 mg/l, Daphnia magna
Acute toxicity - aquatic plants	NOEC, 72 hours: 50 mg/l, Pseudokirchneriella subcapitata
Acute toxicity - microorganisms	EC ₂₀ , 3 hours: 430 mg/l, Activated sludge

2-HYDROXYETHYL METHACRYLATE

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: > 100 mg/l, Oryzias latipes (Red killifish)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 380 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 836 mg/l, Selenastrum capricornutum NOEC, 72 hours: 400 mg/l, Selenastrum capricornutum
Acute toxicity - microorganisms	EC ₅₀ , 16 hours: > 3000 mg/l, Pseudomonas fluorescens

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 24.1 mg/l, Daphnia magna
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DIPHENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINE OXIDE

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 48 hours: 6.53 mg/l, Oryzias latipes (Red killifish)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 3.53 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: > 2.01 mg/l, Pseudokirchneriella subcapitata
Acute toxicity - microorganisms	EC ₅₀ , 180 minutes: > 1000 mg/l, Activated sludge

METHYL METHACRYLATE

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: > 79 mg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 69 mg/l, Daphnia magna
Acute toxicity - aquatic plants	NOEC, 72 hours: > 110 mg/l, Selenastrum capricornutum EC ₅₀ , 72 hours: > 100 mg/l, Selenastrum capricornutum
Acute toxicity - microorganisms	EC ₂₀ , 30 minutes: 150 - 200 mg/l, Activated sludge

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Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEC, 35 days: 9.4 mg/l, Danio rerio (Zebrafish)

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 37 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability No data available.

Ecological information on ingredients.

TETRAHYDROFURFURYL METHACRYLATE

Persistence and degradability The product is readily biodegradable.

Biodegradation - 75%: 28 days

ISOBORNYL ACRYLATE

Biodegradation Water - Degradation 57%: 28 days

N,N-DIMETHYLACRYLAMIDE

Stability (hydrolysis) pH7 - Half-life : > 1 year @ 50°C

Biodegradation Water - Degradation 0%: 28 days

2-HYDROXYETHYL METHACRYLATE

Biodegradation Water - Degradation 84%: 28 days

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

Biodegradation Water - Degradation < 20%: 28 days

METHYL METHACRYLATE

Biodegradation Water - Degradation 94%: 14 days

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not applicable.

Ecological information on ingredients.

N,N-DIMETHYLACRYLAMIDE

Bioaccumulative potential No data available.

2-HYDROXYETHYL METHACRYLATE

Bioaccumulative potential BCF: 1.34 - 1.54,

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

Permabond UV640

Bioaccumulative potential BCF: 23 - 55, Cyprinus carpio (Common carp)

12.4. Mobility in soil

Mobility No data available.

Ecological information on ingredients.

N,N-DIMETHYLACRYLAMIDE

Mobility No data available.

2-HYDROXYETHYL METHACRYLATE

Adsorption/desorption coefficient Water - Koc: 42.7 @ 20°C

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.

12.6. Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

N,N-DIMETHYLACRYLAMIDE

Other adverse effects No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

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)

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Transport labels



14.4. Packing group

III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS F-A, S-F

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	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) 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)
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	12/11/2019
Revision	5
Supersedes date	09/05/2017

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Hazard statements in full

H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H360D May damage the unborn child.
H361f Suspected of damaging fertility.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

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.