



SAFETY DATA SHEET

Permabond F201HV

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

1.1. Product identifier

Product name Permabond F201HV

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

Identified uses Adhesive. Sealant.

1.3. Details of the supplier of the 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 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 (SI 2019 No. 720)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Repr. 1B - H360D STOT SE 3 - H335

Environmental hazards Aquatic Chronic 3 - H412

2.2. Label elements

Hazard pictograms



Signal word

Danger

Permabond F201HV

Hazard statements	H315 Causes skin irritation. H318 Causes serious eye damage. H317 May cause an allergic skin reaction. H360D May damage the unborn child. H335 May cause respiratory irritation. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	P202 Do not handle until all safety precautions have been read and understood. 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, HYDROXYPROPYL METHACRYLATE, METHACRYLIC ACID, CUMENE HYDROPEROXIDE, METHYL METHACRYLATE
Supplementary precautionary statements	P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. 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. P362+P364 Take off contaminated clothing and wash it before reuse. P403+P233 Store in a well-ventilated place. Keep container tightly closed. 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 UK criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

TETRAHYDROFURFURYL METHACRYLATE	30-60%
CAS number: 2455-24-5	EC number: 219-529-5
Classification Skin Sens. 1 - H317 Repr. 1B - H360D Aquatic Chronic 3 - H412	
HYDROXYPROPYL METHACRYLATE	10-30%
CAS number: 27813-02-1	EC number: 248-666-3
Classification Eye Irrit. 2 - H319 Skin Sens. 1 - H317	

PermaBond F201HV

METHACRYLIC ACID		1-5%
CAS number: 79-41-4	EC number: 201-204-4	
Classification Acute Tox. 4 - H302 Acute Tox. 3 - H311 Acute Tox. 4 - H332 Skin Corr. 1A - H314 Eye Dam. 1 - H318 STOT SE 3 - H335		
CUMENE HYDROPEROXIDE		1-< 2.5%
CAS number: 80-15-9	EC number: 201-254-7	
Classification Org. Perox. E - H242 Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 3 - H331 Skin Corr. 1B - H314 Eye Dam. 1 - H318 STOT SE 3 - H335 STOT RE 2 - H373 Aquatic Chronic 2 - H411		
METHYL METHACRYLATE		<1%
CAS number: 80-62-6	EC number: 201-297-1	
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	Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Get medical attention.
Skin contact	Remove contaminated clothing. Wash skin thoroughly with soap and water. If symptoms develop, obtain medical attention
Eye contact	Make sure to remove any contact lenses from the eyes before rinsing. 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	May cause irritation.
-------------------	-----------------------

Permabond F201HV

Skin contact Skin irritation. Mild dermatitis, allergic skin rash.

Eye contact Causes serious eye damage.

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

Notes for the doctor No specific recommendations. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Foam, carbon dioxide or dry powder.

Unsuitable extinguishing media Water.

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.

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

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

Environmental precautions Not considered to be a significant hazard due to the small quantities used. Avoid discharge into drains.

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 Use in a well ventilated area. Avoid contact with skin and eyes. Do not ingest or inhale. Avoid eating, drinking and smoking when using the 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. Never return unused material to storage receptacle.

7.3. Specific end use(s)

Specific end use(s) This product is not recommended for use in joints which will be in contact with either pure oxygen or steam.

Usage description Adhesive. Sealant.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Permabond F201HV

Occupational exposure limits

METHACRYLIC ACID

Long-term exposure limit (8-hour TWA): WEL 20 ppm 72 mg/m³

Short-term exposure limit (15-minute): WEL 40 ppm 143 mg/m³

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

HYDROXYPROPYL METHACRYLATE (CAS: 27813-02-1)

DNEL	Workers - Inhalation; Long term systemic effects: 14.7 mg/m ³
	Workers - Dermal; Long term systemic effects: 4.2 mg/kg/day
PNEC	Fresh water; 0.904 mg/l
	marine water; 0.904 mg/l
	STP; 10 mg/l
	Sediment (Freshwater); 6.28 mg/kg
	Sediment (Marinewater); 6.28 mg/kg
	Soil; 0.727 mg/kg

METHACRYLIC ACID (CAS: 79-41-4)

DNEL	Workers, Industry - Inhalation; Long term local effects: 88 mg/m ³
	Workers, Industry - Dermal; Long term systemic effects: 4.25 mg/kg/day
	Workers, Industry - Inhalation; Long term systemic effects: 29.6 mg/m ³
PNEC	Workers, Industry - Fresh water; 0.82 mg/l
	Workers, Industry - marine water; 0.82 mg/l
	Workers, Industry - STP; 10 mg/l
	Workers, Industry - Soil; 1.2 mg/kg

CUMENE HYDROPEROXIDE (CAS: 80-15-9)

DNEL	Workers - Inhalation; Long term systemic effects: 6 mg/m ³
-------------	---

PermaBond F201HV

PNEC

Workers - Fresh water; 0.0031 mg/l
 Workers - marine water; 0.00031 mg/l
 Workers - Intermittent release; 0.031 mg/l
 Workers, Industry - Soil; 1.2 mg/kg
 Workers - STP; 0.35 mg/l
 Workers - Sediment (Freshwater); 0.023 mg/kg
 Workers - Sediment (Marinewater); 0.0023 mg/kg
 Workers - Soil; 0.0029 mg/kg

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 ventilation. 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: ≥ 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/manufacturer, 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. 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

Brown.

Permabond F201HV

Odour	Acrylic
Odour threshold	Not available.
pH	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. Miscible with the following materials: Organic solvents.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	≈32500 mPa s @ 23°C Thixotropic
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.
------------	--

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	Avoid the absence of air, and metal contamination.
---------------------	--

10.5. Incompatible materials

Materials to avoid	Metals and their salts. Free radical initiators.
--------------------	--

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

PermaBond F201HV

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 corrosion/irritation

Animal data Irritating to skin.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Skin sensitisation

Skin sensitisation May cause sensitisation by skin contact.

Reproductive toxicity

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.

Toxicological information on ingredients.

TETRAHYDROFURFURYL METHACRYLATE

Acute toxicity - oral

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

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.

Permabond F201HV

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.

HYDROXYPROPYL METHACRYLATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,000.1

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 Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Moderately irritating.

Respiratory sensitisation

Respiratory sensitisation There is no evidence that the material can lead to respiratory hypersensitivity.

Skin sensitisation

Skin sensitisation Epidemiological studies have shown evidence of skin sensitisation.

Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation: Negative.

Genotoxicity - in vivo Chromosome aberration: Negative.

Carcinogenicity

Carcinogenicity No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Reproductive toxicity - fertility Screening - NOAEL 300 mg/kg/day, Oral, Rat P

Reproductive toxicity - development Developmental toxicity: - NOAEL: 1000 mg/kg/day, Oral, Rat

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 Not classified as a specific target organ toxicant after repeated exposure.

Permabond F201HV

Aspiration hazard

Aspiration hazard No information available.

METHACRYLIC ACID

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 1,320.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 1,000.0

Species Rabbit

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 7.1

Species Rat

Skin corrosion/irritation

Animal data Dose: Method: OECD 404, 3 minutes, Rabbit Corrosive.

Serious eye damage/irritation

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

Respiratory sensitisation

Respiratory sensitisation Guinea pig: Not sensitising. Method: various test systems

Skin sensitisation

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

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity CMR: no

Reproductive toxicity

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

Reproductive toxicity - development Non-teratogenic, not embryotoxic

Specific target organ toxicity - single exposure

Target organs Respiratory tract Irritating.

Specific target organ toxicity - repeated exposure

Target organs No specific target organs known.

Aspiration hazard

Permabond F201HV

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

CUMENE HYDROPEROXIDE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 328.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 1,200.0

Species Rat

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 1.37

Species Rat

Skin corrosion/irritation

Animal data Highly irritating.

Serious eye damage/irritation

Serious eye damage/irritation Irritating to eyes.

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Positive.

Genotoxicity - in vivo This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity CMR: No

Reproductive toxicity

Reproductive toxicity - fertility No specific test data are available.

Reproductive toxicity - development Developmental toxicity: - NOAEL: ≥100 mg/kg/day, Oral, Rat

Specific target organ toxicity - single exposure

STOT - single exposure No specific test data are available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Toxic: danger of serious damage to health by prolonged exposure through inhalation.

Aspiration hazard

Aspiration hazard No specific test data are available.

Permabond F201HV

METHYL METHACRYLATE

Acute toxicity - oral

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

Species Rat

Acute toxicity - dermal

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

Species Rat

Acute toxicity - inhalation

Acute toxicity inhalation 29.8
(LC₅₀ vapours mg/l)

Species Rat

Skin corrosion/irritation

Skin corrosion/irritation Not irritating. Prolonged skin contact may cause temporary irritation.

Serious eye damage/irritation

Serious eye Not irritating.
damage/irritation

Respiratory sensitisation

Respiratory sensitisation Mouse: Sensitising.

Skin sensitisation

Skin sensitisation Local Lymph Node Assay (LLNA) - Mouse: Sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Inconclusive.

Genotoxicity - in vivo This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity CMR: no

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

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

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

Permabond F201HV

Aspiration hazard

Based on available data the classification criteria are not met.

SECTION 12: Ecological information

Ecotoxicity

Harmful 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

HYDROXYPROPYL METHACRYLATE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 48 hours: 493 mg/l, Leuciscus idus (Golden orfe)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 380 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: > 97.2 mg/l, Pseudokirchneriella subcapitata
NOEC, 72 hours: 97.2 mg/l, Pseudokirchneriella subcapitata

Chronic aquatic toxicity

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

METHACRYLIC ACID

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 85 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: > 130 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 45 mg/l, Selenastrum capricornutum
LOEC, 72 hours: 45 mg/l, Selenastrum capricornutum

Acute toxicity - microorganisms EC₅₀, 17 hours: 270 mg/l, Pseudomonas putida

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEC, 35 days: 10 mg/l, Danio rerio (Zebrafish)

PermaBond F201HV

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 53 mg/l, Daphnia magna

CUMENE HYDROPEROXIDE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hour: 3.9 mg/l, Oncorhynchus mykiss (Rainbow trout)

METHYL METHACRYLATE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: > 79 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 69 mg/l, Daphnia magna

Acute toxicity - aquatic plants NOEC, 72 hours: > 110 mg/l, Selenastrum capricornutum
EC₅₀, 72 hours: > 100 mg/l, Selenastrum capricornutum

Acute toxicity - microorganisms EC₂₀, 30 minutes: 150 - 200 mg/l, Activated sludge

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

HYDROXYPROPYL METHACRYLATE

Biodegradation Water - Degradation 94.2%: 28 days

METHACRYLIC ACID

Biodegradation Water - Degradation 86%: 28 days

CUMENE HYDROPEROXIDE

Biodegradation The substance is readily biodegradable.

METHYL METHACRYLATE

Biodegradation Water - Degradation 94%: 14 days

12.3. Bioaccumulative potential

Permabond F201HV

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not available.

12.4. Mobility in soil

Mobility No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

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 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

Waste class 08 04 09* waste adhesives and sealants containing organic solvents or other dangerous substances.

SECTION 14: Transport information

General The product is not classified as dangerous for carriage.

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

PermaBond F201HV

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	COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 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. Approved Classification and Labelling Guide (Sixth edition) L131. Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision date	28/10/2022
Revision	7
Supersedes date	21/09/2018
Hazard statements in full	H225 Highly flammable liquid and vapour. H242 Heating may cause a fire. H302 Harmful if swallowed. H311 Toxic in contact with skin. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H331 Toxic if inhaled. H332 Harmful if inhaled. H335 May cause respiratory irritation. H360D May damage the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. 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.