



SAFETY DATA SHEET

Permabond Polyolefin Primer (POP)

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

1.1. Product identifier

Product name Permabond Polyolefin Primer (POP)

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

Identified uses Primer.

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 (EC 1272/2008)

Physical hazards Flam. Liq. 2 - H225

Health hazards Skin Irrit. 2 - H315 STOT SE 3 - H336 Asp. Tox. 1 - H304

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

Human health In high concentrations, vapours and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea. Irritating to eyes. Repeated exposure may cause skin dryness or cracking.

Environmental Very toxic to aquatic life with long lasting effects.

Physicochemical The product is highly flammable, and explosive vapours/air mixtures may be formed even at normal room temperatures.

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2.2. Label elements

Hazard pictograms



Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H304 May be fatal if swallowed and enters airways.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing vapour/ spray.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331 Do NOT induce vomiting.
P302+P352a IF ON SKIN: Wash with plenty of soap and water
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Contains

HEPTANE

Supplementary precautionary statements

P243 Take action to prevent static discharges.
P264 Wash contaminated skin thoroughly after handling.
P273 Avoid release to the environment.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves, eye and face protection.
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

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

HEPTANE			60-100%
CAS number: 142-82-5	EC number: 205-563-8	REACH registration number: 01-2119457603-38-XXXX	
M factor (Acute) = 1	M factor (Chronic) = 1		
Classification			
Flam. Liq. 2 - H225			
Skin Irrit. 2 - H315			
STOT SE 3 - H336			
Asp. Tox. 1 - H304			
Aquatic Acute 1 - H400			
Aquatic Chronic 1 - H410			

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1,8-DIAZABICYCLO[5.4.0]UNDEC-7-ENE			<1%
CAS number: 6674-22-2	EC number: 229-713-7	REACH registration number: 01-2119977097-24-XXXX	
Classification Acute Tox. 3 - H301 Skin Corr. 1B - H314 Eye Dam. 1 - H318			

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

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

Inhalation	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Drink a few glasses of water or milk. Do not induce vomiting. Get medical attention.
Skin contact	Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation persists 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 if any discomfort continues.

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

General information	Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
Inhalation	Vapours may cause drowsiness and dizziness.
Skin contact	Prolonged contact may cause redness, irritation and dry skin.

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

Notes for the doctor	Avoid vomiting and stomach flushing because of the risk of aspiration.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Foam, carbon dioxide or dry powder.
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	The product is flammable. Heating may generate flammable vapours. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.
Hazardous combustion products	Burning produces irritating, toxic and obnoxious fumes. Carbon monoxide, carbon dioxide, and unknown hydrocarbons.

5.3. Advice for firefighters

Protective actions during firefighting	Containers close to fire should be removed or cooled with water.
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Special protective equipment for firefighters Wear self contained breathing apparatus and 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. Remove or isolate all sources of ignition. Provide adequate ventilation.

6.2. Environmental precautions

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb in vermiculite, dry sand or earth and place into containers. 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 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. During application and drying, solvent vapours will be emitted. Use in a well ventilated area. Do not ingest or inhale. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep away from sources of ignition - No smoking.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) Primer.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

HEPTANE

Long-term exposure limit (8-hour TWA): WEL 500 ppm 2085 mg/m³

WEL = Workplace Exposure Limit.

HEPTANE (CAS: 142-82-5)

DNEL Workers - Inhalation; Long term systemic effects: 2085 mg/m³
Workers - Dermal; Long term systemic effects: 300 mg/kg/day
Workers - Oral; Long term systemic effects: 149 mg/kg/day

1,8-DIAZABICYCLO[5.4.0]UNDEC-7-ENE (CAS: 6674-22-2)

DNEL Workers - Inhalation; Long term systemic effects: 4.4 mg/m³
Workers - Dermal; Long term systemic effects: 1.25 mg/kg/day

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PNEC

- Fresh water; 0.24 mg/l
- marine water; 0.024 mg/l
- STP; 13 mg/l
- Sediment (Freshwater); 137 mg/kg
- Sediment (Marinewater); 13.7 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust 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

Use engineering controls to reduce air contamination to permissible exposure level. Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Provide eyewash station and safety shower. Uniforms, coveralls, or a lab coat should be worn

Hygiene measures

Wash at the end of each work shift and before eating, smoking and using the toilet. 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. Combination filter, type A2/P2. (EN14387)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Characteristic.
Odour threshold	Not available.
pH	Not relevant.
Melting point	Not available.
Initial boiling point and range	98°C

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Flash point	-4°C
Evaporation rate	Not determined.
Upper/lower flammability or explosive limits	Upper flammable/explosive limit: 7% Lower flammable/explosive limit: 1.1%
Vapour pressure	≈53.3 mbar @ 20°C
Vapour density	Not available.
Relative density	0.7
Solubility(ies)	Insoluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	220°C
Decomposition Temperature	Not available.
Viscosity	≈0.6 mPa s @ 23°C
Explosive properties	Not determined.
Oxidising properties	Not available.

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	The following materials may react with the product: Strong oxidising agents.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	There are no known reactivity hazards associated with this product.
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10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition.
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10.5. Incompatible materials

Materials to avoid	Strong oxidising agents.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.
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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.
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Aspiration hazard

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Aspiration hazard	Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
Inhalation	In high concentrations, vapours may irritate throat and respiratory system and cause coughing. Vapours have a narcotic effect.
Ingestion	May be harmful if swallowed and enters airways.
Skin contact	Repeated exposure may cause skin dryness or cracking. May cause sensitisation by skin contact.
Eye contact	Irritating and may cause redness and pain.

Toxicological information on ingredients.

HEPTANE

Acute toxicity - oral

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

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,001.0

Species Rabbit

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 29.29

Species Rat

Skin corrosion/irritation

Skin corrosion/irritation Irritating to skin.

Serious eye damage/irritation

Serious eye damage/irritation Not irritating.

Skin sensitisation

Skin sensitisation Not sensitising.

Carcinogenicity

Carcinogenicity There is no evidence that the product can cause cancer.

Reproductive toxicity

Reproductive toxicity - fertility One-generation study - NOAEL 31680 mg/m³, Inhalation, Rat

Specific target organ toxicity - single exposure

STOT - single exposure May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

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Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

1,8-DIAZABICYCLO[5.4.0]UNDEC-7-ENE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 300.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 1,233.0

Species Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No information available.

Skin corrosion/irritation

Skin corrosion/irritation Corrosive to skin.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation. Rabbit Corrosive

Skin sensitisation

Skin sensitisation No information available.

Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation: Negative.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility Screening - NOAEL 150 mg/kg/day, Oral, Rat F1

Reproductive toxicity - development Developmental toxicity: - NOAEL: 150 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.

SECTION 12: Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

12.1. Toxicity

PermaBond Polyolefin Primer (POP)

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.

HEPTANE

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LL₅₀, 96 hours: 5.738 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 1.5 mg/l, Daphnia magna

Acute toxicity - aquatic plants NOELR, 72 hours: 0.97 mg/l, Pseudokirchneriella subcapitata

Chronic aquatic toxicity

M factor (Chronic) 1

Chronic toxicity - fish early life stage NOELR, 28 days: 1.284 mg/l, Oncorhynchus mykiss (Rainbow trout)

Chronic toxicity - aquatic invertebrates NOELR, 21 days: 1 mg/l, Daphnia magna

1,8-DIAZABICYCLO[5.4.0]UNDEC-7-ENE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 100 - 220 mg/l, Leuciscus idus (Golden orfe)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 50 mg/l, Daphnia magna

Acute toxicity - microorganisms EC₅₀, 17 hours: 330 mg/l, Pseudomonas putida

12.2. Persistence and degradability

Persistence and degradability The product is readily biodegradable.

Ecological information on ingredients.

1,8-DIAZABICYCLO[5.4.0]UNDEC-7-ENE

Chemical oxygen demand 230 mg O₂/l

12.3. Bioaccumulative potential

Bioaccumulative potential Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

Partition coefficient Not determined.

12.4. Mobility in soil

Mobility The product contains organic solvents which will evaporate easily from all surfaces.

12.5. Results of PBT and vPvB assessment

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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.

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 Absorb in vermiculite, dry sand or earth and place into containers. Dispose of waste via a licensed waste disposal contractor. Containers should be thoroughly emptied before disposal because of the risk of an explosion.

Waste class 14 06 03 other solvents and solvent mixtures

SECTION 14: Transport information

14.1. UN number

1206

14.2. UN proper shipping name

HEPTANES

14.3. Transport hazard class(es)

3

Transport labels



14.4. Packing group

II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS F-E, S-D

Hazard Identification Number (ADR/RID) 33

Tunnel restriction code (D/E)

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.

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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). EH40/2005 Workplace exposure limits.
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. 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	19/01/2022
Revision	6
Supersedes date	11/01/2018
Hazard statements in full	H225 Highly flammable liquid and vapour. H301 Toxic if swallowed. H304 May be fatal if swallowed and enters airways. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H318 Causes serious eye damage. H336 May cause drowsiness or dizziness. H400 Very toxic to aquatic life. H410 Very toxic 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.