

# ARBOFLEX<sup>®</sup> PU

## LIQUID WATERPROOFING

### SAFETY DATA SHEET ARBOFLEX<sup>®</sup> PU

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

##### 1.1. Product identifier

Product name ARBOFLEX<sup>®</sup> PU

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

Identified uses Liquid polyurethane coating for waterproofing and protection.

Uses advised against Restricted to professional users.

##### 1.3. Details of the supplier of the safety data sheet

Supplier Carlisle Construction Materials Ltd.  
Lancaster House, Concorde Way,  
Millennium Business Park,  
Mansfield, Nottinghamshire,  
NG19 7DW  
United Kingdom  
01623 627285  
sds.arbo@ccm-europe.com

##### 1.4. Emergency telephone number

Emergency telephone 01623 627285 (office hours only)

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification (EC 1272/2008)

Physical hazards Flam. Liq. 3 - H226

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 STOT RE 2 - H373

Environmental hazards Not Classified

##### 2.2. Label elements

###### Hazard pictograms



Signal word

Warning

###### Hazard statements

H226 Flammable liquid and vapour.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H317 May cause an allergic skin reaction.  
H373 May cause damage to organs through prolonged or repeated exposure.

## ARBOFLEX® PU

<b>Precautionary statements</b>	<p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P260 Do not breathe vapour/ spray.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P403+P235 Store in a well-ventilated place. Keep cool.</p>
<b>Contains</b>	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 2,4-diisocyanato-1-methylbenzene, Xylene

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 2,4-diisocyanato-1-methylbenzene</b>	<b>25 - &lt; 50%</b>
CAS number: 37273-56-6	

#### Classification

Eye Irrit. 2 - H319

Skin Sens. 1 - H317

<b>Xylene</b>	<b>10 - &lt;20%</b>
CAS number: 1330-20-7	EC number: 215-535-7
REACH registration number: 01-2119488216-32-XXXX	

#### Classification

Flam. Liq. 3 - H226

Acute Tox. 4 - H312

Acute Tox. 4 - H332

Skin Irrit. 2 - H315

Eye Irrit. 2 - H319

STOT SE 3 - H335

STOT RE 2 - H373

Asp. Tox. 1 - H304

Aquatic Chronic 3 - H412

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General information</b>	In all cases of doubt, or if symptoms persist, seek medical attention.
<b>Inhalation</b>	If inhalation causes adverse effects, remove to fresh air.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention if any discomfort continues.
<b>Skin contact</b>	After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.

## ARBOFLEX® PU

**Eye contact** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists after washing.

**Protection of first aiders** First aid personnel should wear appropriate protective equipment during any rescue.

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

**General information** The product contains a sensitising substance.

**Inhalation** No specific symptoms known.

**Ingestion** No specific symptoms known.

**Skin contact** Skin irritation. May cause sensitisation by skin contact.

**Eye contact** Causes serious eye irritation.

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

**Notes for the doctor** Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media** Extinguish with 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** Flammable liquid and vapour.

**Hazardous combustion products** Oxides of nitrogen. Oxides of carbon. Isocyanates.

### 5.3. Advice for firefighters

**Protective actions during firefighting** Water spray should be used to cool containers. Control run-off water by containing and keeping it out of sewers and watercourses.

**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** Avoid contact with eyes and skin. Wear personal protective equipment (See section 8). Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. In case of spills, beware of slippery floors and surfaces.

### 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. Collect and place in suitable waste disposal containers and seal securely.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. For waste disposal, see Section 13. See Section 11 for additional information on health hazards.

## ARBOFLEX® PU

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Usage precautions

For personal protection, see Section 8. Use only outdoors or in a well-ventilated area. Avoid breathing vapour/spray. Avoid contact with skin and eyes. Wash contaminated skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Ground/bond container and receiving equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use only non-sparking tools. Use explosion-proof electrical, ventilating and lighting equipment.

##### Advice on general occupational hygiene

Do not eat, drink or smoke when using this product.

#### 7.2. Conditions for safe storage, including any incompatibilities

##### Storage precautions

Keep container tightly closed, in a cool, well ventilated place. Store at below 20 °C. Protect from sunlight. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

#### 7.3. Specific end use(s)

##### Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

### SECTION 8: Exposure controls/Personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

##### Xylene

Long-term exposure limit (8-hour TWA): WEL 50 ppm 220 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 100 ppm 441 mg/m<sup>3</sup>

Sk

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

##### Xylene (CAS: 1330-20-7)

<b>Biological limit values</b>	Xylene, o-, m-, p- or mixed isomers: 650 mmol methyl hippuric acid/mol creatinine in urine. Post shift.
<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 221 mg/m <sup>3</sup> Workers - Inhalation; Short term systemic effects: 442 mg/m <sup>3</sup> Workers - Dermal; Long term systemic effects: 212 mg/kg/day
<b>PNEC</b>	- Fresh water; 0.327 mg/l - marine water; 0.327 mg/l - Intermittent release; 0.327 mg/l - STP; 6.58 mg/l - Sediment (Freshwater); 12.46 mg/kg - Sediment (Marinewater); 12.46 mg/kg - Soil; 2.31 mg/kg

#### 8.2. Exposure controls

##### Protective equipment



## ARBOFLEX® PU

<b>Appropriate engineering controls</b>	This product must not be handled in a confined space without adequate ventilation.
<b>Eye/face protection</b>	Wear approved safety goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.
<b>Hand protection</b>	To protect hands from chemicals, gloves should comply with European Standard EN374. Recommendations for gloves: Polychloroprene - CR: thickness $\geq 0.5$ mm; breakthrough time $\geq 480$ min. Nitrile rubber - NBR: thickness $\geq 0.35$ mm; breakthrough time $\geq 480$ min. Butyl rubber - IIR: thickness $\geq 0.5$ mm; breakthrough time $\geq 480$ min. Fluorinated rubber - FKM: thickness $\geq 0.4$ mm; breakthrough time $\geq 480$ min.
<b>Other skin and body protection</b>	Wear appropriate clothing to prevent any possibility of skin contact.
<b>Hygiene measures</b>	Do not eat, drink or smoke when using this product. Take off immediately all contaminated clothing and wash it before reuse. Wash contaminated skin thoroughly after handling.
<b>Respiratory protection</b>	Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Viscous liquid.
<b>Colour</b>	Grey. or Red.
<b>Odour</b>	No data available.
<b>Odour threshold</b>	No data available.
<b>pH</b>	No data available.
<b>Melting point</b>	No data available.
<b>Initial boiling point and range</b>	No data available.
<b>Flash point</b>	$> 30^{\circ}\text{C} / 86^{\circ}\text{F}$ Method: Not specified.
<b>Evaporation rate</b>	No data available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	No data available.
<b>Vapour pressure</b>	No data available.
<b>Vapour density</b>	No data available.
<b>Relative density</b>	1.4 @ $23^{\circ}\text{C}$ ISO 1675
<b>Solubility(ies)</b>	No data available.
<b>Partition coefficient</b>	No data available.
<b>Auto-ignition temperature</b>	No data available.
<b>Decomposition Temperature</b>	No data available.
<b>Viscosity</b>	300000 - 500000 cP @ $23^{\circ}\text{C}$ ISO 2555
<b>Explosive properties</b>	No data available.

## ARBOFLEX® PU

**Oxidising properties** No data available.

### 9.2. Other information

**Other information** Not available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity** This material react with certain agents under certain conditions - see Section 10.5.

### 10.2. Chemical stability

**Stability** Stable under the prescribed storage conditions.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** Reactions with the following materials may generate heat: Oxidising agents.

### 10.4. Conditions to avoid

**Conditions to avoid** Avoid heat, flames and other sources of ignition. Avoid exposure to high temperatures or direct sunlight. Take precautionary measures against static discharges.

### 10.5. Incompatible materials

**Materials to avoid** Keep away from flammable and combustible materials. Oxidising agents.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Oxides of carbon. Oxides of nitrogen. Isocyanates.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

**Toxicological effects** There are no data available on this product.

#### Acute toxicity - oral

**Summary** Based on available data the classification criteria are not met.

#### Acute toxicity - dermal

**Summary** Based on available data the classification criteria are not met.

**ATE dermal (mg/kg)** 11,000.0

#### Acute toxicity - inhalation

**Summary** Based on available data the classification criteria are not met.

**ATE inhalation (vapours mg/l)** 110.0

#### Skin corrosion/irritation

**Skin corrosion/irritation** Causes skin irritation.

#### Serious eye damage/irritation

**Serious eye damage/irritation** Causes serious eye irritation.

#### Respiratory sensitisation

**Respiratory sensitisation** Based on available data the classification criteria are not met.

#### Skin sensitisation

**Skin sensitisation** May cause an allergic skin reaction.

## ARBOFLEX® PU

### Germ cell mutagenicity

**Summary** Based on available data the classification criteria are not met.

### Carcinogenicity

**Summary** Based on available data the classification criteria are not met.

### Reproductive toxicity

**Summary** Based on available data the classification criteria are not met.

### Specific target organ toxicity - single exposure

**STOT - single exposure** Based on available data the classification criteria are not met.

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** May cause damage to organs through prolonged or repeated exposure.

### Aspiration hazard

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

**Inhalation** No specific symptoms known.

**Ingestion** No specific symptoms known.

**Skin contact** Causes skin irritation. May cause sensitisation by skin contact.

**Eye contact** Causes serious eye irritation.

**Acute and chronic health hazards** May cause damage to organs through prolonged or repeated exposure.

### Toxicological information on ingredients.

#### Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 2,4-diisocyanato-1-methylbenzene

##### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 5,000.0

**Species** Rat

**ATE oral (mg/kg)** 5,000.0

##### Acute toxicity - inhalation

**Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l)** 3,820.0

**Species** Rat

**ATE inhalation (vapours mg/l)** 3,820.0

#### Xylene

##### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 3,523.0

**Species** Rat

**ATE oral (mg/kg)** 3,523.0

**ARBOFLEX® PU****Acute toxicity - dermal**

**Acute toxicity dermal (LD<sub>50</sub>)** 12,126.0 mg/kg

**Species** Rabbit

**ATE dermal (mg/kg)** 1,100.0

**Acute toxicity - inhalation**

**Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l)** 27.124

**Species** Rat

**ATE inhalation (vapours mg/l)** 11.0

**Skin corrosion/irritation**

**Animal data** Primary dermal irritation index: 3.0 Moderately irritating.

**Serious eye damage/irritation**

**Serious eye damage/irritation** Moderately irritating.

**Respiratory sensitisation**

**Respiratory sensitisation** No specific test data are available.

**Specific target organ toxicity - single exposure**

**STOT - single exposure** Respiratory irritation.

**Specific target organ toxicity - repeated exposure**

**STOT - repeated exposure** May cause damage to organs through prolonged or repeated exposure.

**Aspiration hazard**

**Aspiration hazard** May be fatal if swallowed and enters airways.

**SECTION 12: Ecological information**

**Ecotoxicity** The product contains a substance which is harmful to aquatic organisms.

**12.1. Toxicity**

**Toxicity** There are no data for the product.

**Acute aquatic toxicity**

**Summary** Based on available data the classification criteria are not met.

**Chronic aquatic toxicity**

**Summary** Based on available data the classification criteria are not met.

**Ecological information on ingredients.**

**Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 2,4-diisocyanato-1-methylbenzene**

**Acute aquatic toxicity**

**Acute toxicity - microorganisms** EC<sub>50</sub>, : >10000 mg/l, Bacteria

**ARBOFLEX® PU****Xylene****Acute aquatic toxicity**

<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 2.6 - 11.23 mg/l, Fish
<b>Acute toxicity - aquatic invertebrates</b>	IC <sub>50</sub> , 24 hours: 1 mg/l, Daphnia magna EC <sub>50</sub> , 48 hours: 3.82 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 72 hours: 2.2 mg/l, Selenastrum capricornutum

**Chronic aquatic toxicity**

<b>Chronic toxicity - fish early life stage</b>	NOEC, 56 days: > 1.3 mg/l, Oncorhynchus mykiss (Rainbow trout)
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 7 days: 0.96 mg/l, Ceriodaphnia sp.

**12.2. Persistence and degradability**

**Persistence and degradability** The product is not expected to be biodegradable.

**Ecological information on ingredients.****Xylene**

**Biodegradation** The substance is readily biodegradable.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential** No data available on bioaccumulation.  
**Partition coefficient** No data available.

**Ecological information on ingredients.****Xylene**

**Bioaccumulative potential** BCF: 25.9, Oncorhynchus mykiss (Rainbow trout)  
**Partition coefficient** log Pow: 3.2

**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** When handling waste, the safety precautions applying to handling of the product should be considered.

**Disposal methods** Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

**ARBOFLEX® PU**

**Waste class** HP3 Flammable HP4 Irritant HP5 STOT / Aspiration toxicity HP13 Sensitising Recommended  
EWC Code 08 04 09\*

**SECTION 14: Transport information**

**Road transport notes** Transport in accordance with 2.2.3.1.5 of ADR.

**Sea transport notes** Transport in accordance with 2.3.2.5 of the IMDG Code.

**14.1. UN number**

**UN No. (ADR/RID)** 1139

**UN No. (IMDG)** 1139

**UN No. (ICAO)** 1139

**UN No. (ADN)** 1139

**14.2. UN proper shipping name**

**Proper shipping name (ADR/RID)** COATING SOLUTION

**Proper shipping name (IMDG)** COATING SOLUTION

**Proper shipping name (ICAO)** COATING SOLUTION

**Proper shipping name (ADN)** COATING SOLUTION

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

**ADR/RID class** 3

**ADR/RID classification code** F1

**ADR/RID label** 3

**IMDG class** 3

**ICAO class/division** 3

**ADN class** 3

**Transport labels****14.4. Packing group**

**ADR/RID packing group** III

**IMDG packing group** III

**ICAO packing group** III

**ADN packing group** III

**14.5. Environmental hazards**

**Environmentally hazardous substance/marine pollutant**

No.

**14.6. Special precautions for user**

**EmS** F-E, S-E

**ARBOFLEX® PU**

<b>ADR transport category</b>	3
<b>Emergency Action Code</b>	•3Y
<b>Hazard Identification Number (ADR/RID)</b>	30
<b>Tunnel restriction code</b>	(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.

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

<b>National regulations</b>	Control of Substances Hazardous to Health Regulations 2002 (as amended). EH40/2005 Workplace exposure limits. Health and Safety at Work etc. Act 1974 (as amended). The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, UK SI 2019/720. The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020, UK SI 2020/1567. The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, UK SI 2019/758, UK SI 2019/858 and UK SI 2019/1144. The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020, UK SI 2020/1577.
<b>EU legislation</b>	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). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
<b>Authorisations (Annex XIV Regulation 1907/2006)</b>	None of the substances in the product are listed.
<b>Restrictions (Annex XVII Regulation 1907/2006)</b>	No relevant restrictions.
<b>Seveso Directive - Control of major accident hazards</b>	P5c Lower-tier 5000 tonnes Upper-tier 50000 tonnes.

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out for the mixture.

## ARBOFLEX® PU

### SECTION 16: Other information

<b>Abbreviations and acronyms used in the safety data sheet</b>	<p>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</p> <p>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</p> <p>ATE: Acute Toxicity Estimate.</p> <p>DNEL: Derived No Effect Level.</p> <p>EC<sub>50</sub>: 50% of maximal Effective Concentration.</p> <p>IATA: International Air Transport Association.</p> <p>ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.</p> <p>LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.</p> <p>IMDG: International Maritime Dangerous Goods.</p> <p>LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).</p> <p>PBT: Persistent, Bioaccumulative and Toxic substance.</p> <p>PNEC: Predicted No Effect Concentration.</p> <p>vPvB: Very Persistent and Very Bioaccumulative.</p>
<b>Classification abbreviations and acronyms</b>	<p>Acute Tox. = Acute toxicity</p> <p>Aquatic Chronic = Hazardous to the aquatic environment (chronic)</p> <p>Asp. Tox. = Aspiration hazard</p> <p>Eye Irrit. = Eye irritation</p> <p>Flam. Liq. = Flammable liquid</p> <p>Skin Irrit. = Skin irritation</p> <p>Skin Sens. = Skin sensitisation</p> <p>STOT RE = Specific target organ toxicity-repeated exposure</p> <p>STOT SE = Specific target organ toxicity-single exposure</p>
<b>Key literature references and sources for data</b>	SDS from supplier. Source: European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
<b>Classification procedures according to Regulation (EC) 1272/2008</b>	Flam. Liq. 3 - H226: On basis of test data. Skin Irrit. 2 - H315, Skin Sens. 1 - H317, Eye Irrit. 2 - H319, STOT RE 2 - H373: Calculation method.
<b>Revision date</b>	22/07/2021
<b>Revision</b>	1
<b>SDS number</b>	20382
<b>SDS status</b>	Approved.
<b>Hazard statements in full</b>	<p>H226 Flammable liquid and vapour.</p> <p>H304 May be fatal if swallowed and enters airways.</p> <p>H312 Harmful in contact with skin.</p> <p>H315 Causes skin irritation.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H319 Causes serious eye irritation.</p> <p>H332 Harmful if inhaled.</p> <p>H335 May cause respiratory irritation.</p> <p>H373 May cause damage to organs through prolonged or repeated exposure.</p> <p>H412 Harmful to aquatic life with long lasting effects.</p>

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.