

ARBOFLEX[®] PU

LIQUID WATERPROOFING

SAFETY DATA SHEET

PART A of the two component product, ARBOFLEX 2C TOP COAT PART A / PART B

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

1.1. Product identifier

Product name PART A of the two component product, ARBOFLEX 2C TOP COAT PART A / PART B

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

Identified uses Two-component, aliphatic polyurethane solvent based resin surface coating for industrial & commercial flooring and protection against UV rays

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

National emergency telephone number 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 Sens. 1 - H317 STOT SE 3 - H335, H336

Environmental hazards Aquatic Chronic 2 - H411

2.2. Label elements

Hazard pictograms



Signal word

Warning

Hazard statements

H226 Flammable liquid and vapour.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

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Precautionary statements	<p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P261 Avoid breathing vapour/ spray.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P312 Call a POISON CENTRE/doctor if you feel unwell.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P403+P235 Store in a well-ventilated place. Keep cool.</p>
Contains	Hydrocarbons, C9, aromatics, 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 1,2-propanediol mono(2-methyl-2-propenoate) and 2-propenoic acid, Xylene, Fatty acids, C14-18 and C16-18-unsatd., maleated

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

<p>Hydrocarbons, C9, aromatics</p> <p>CAS number: 64742-95-6</p>	<p>REACH registration number: 01-2119455851-35-XXXX</p>	<p>25 - < 50%</p>
<p>Classification</p> <p>Flam. Liq. 3 - H226 STOT SE 3 - H335, H336 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411</p>		
<p>2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 1,2-propanediol mono(2-methyl-2-propenoate) and 2-propenoic acid</p> <p>CAS number: 37237-99-3</p>		
<p>Classification</p> <p>Skin Sens. 1 - H317</p>		
<p>Xylene</p> <p>CAS number: 1330-20-7</p>	<p>EC number: 215-535-7</p>	<p>< 5%</p>
<p>Classification</p> <p>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</p>		

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2-Methoxy-1-methylethyl acetate	< 1%
CAS number: 108-65-6	EC number: 203-603-9
	REACH registration number: 01-2119475791-29-XXXX
Classification	
Flam. Liq. 3 - H226	
STOT SE 3 - H336	

Fatty acids, C14-18 and C16-18-unsatd., maleated	< 1%
CAS number: 85711-46-2	EC number: 288-306-2
	REACH registration number: 01-2119976378-19-0000
Classification	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Skin Sens. 1B - H317	

Ethylbenzene	< 0.1%
CAS number: 100-41-4	EC number: 202-849-4
Classification	
Flam. Liq. 2 - H225	
Acute Tox. 4 - H332	
STOT RE 2 - H373	
Asp. Tox. 1 - H304	

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention. Place unconscious person on their side in the recovery position and ensure breathing can take place.
Ingestion	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention if symptoms are severe or persist.
Skin contact	It is important to remove the substance from the skin immediately. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. In the event of any sensitisation symptoms developing, ensure further exposure is avoided. Get medical attention if symptoms are severe or persist after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing. Vapours may cause headache, fatigue, dizziness and nausea. Central nervous system depression.
Ingestion	May cause sensitisation or allergic reactions in sensitive individuals.
Skin contact	May cause skin sensitisation or allergic reactions in sensitive individuals.
Eye contact	No specific symptoms known. May be slightly irritating to eyes.

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

Notes for the doctor	Treat symptomatically. May cause sensitisation or allergic reactions in sensitive individuals.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
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	Containers can burst violently or explode when heated, due to excessive pressure build-up. Flammable liquid and vapour. Vapours may be ignited by a spark, a hot surface or an ember. Vapours may form explosive mixtures with air. Fire-water run-off in sewers may create fire or explosion hazard.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

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. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Evacuate area. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Promptly remove any clothing that becomes contaminated. Avoid inhalation of vapours and spray/mists. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes.
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6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Do not allow material to enter confined spaces, due to the risk of explosion. Absorb spillage with sand or other inert absorbent. The contaminated absorbent may pose the same hazard as the spilled material. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. The product is flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Take precautionary measures against static discharge. Use only non-sparking tools. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store at below 20 °C. Avoid exposure to high temperatures or direct sunlight. Store away from incompatible materials (see Section 10). Keep away from oxidising materials, heat and flames. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

Storage class Flammable liquid storage.

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/m³

Short-term exposure limit (15-minute): WEL 100 ppm 441 mg/m³

Sk, BMGV

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2-Methoxy-1-methylethyl acetate

Long-term exposure limit (8-hour TWA): WEL 50 ppm 274 mg/m³

Short-term exposure limit (15-minute): WEL 100 ppm 548 mg/m³

Sk

Ethylbenzene

Long-term exposure limit (8-hour TWA): WEL 100 ppm 441 mg/m³

Short-term exposure limit (15-minute): WEL 125 ppm 552 mg/m³

Sk

WEL = Workplace Exposure Limit.

Sk = Can be absorbed through the skin.

BMGV = Biological monitoring guidance value.

Hydrocarbons, C9, aromatics (CAS: 64742-95-6)

DNEL

Workers - Inhalation; Long term systemic effects: 150 mg/m³

Workers - Dermal; Long term systemic effects: 25 mg/kg/day

Xylene (CAS: 1330-20-7)

Biological limit values

Xylene, o-, m-, p- or mixed isomers: 650 mmol methyl hippuric acid/mol creatinine in urine. Post shift.

DNEL

Workers - Inhalation; Long term systemic effects: 221 mg/m³

Workers - Inhalation; Short term systemic effects: 442 mg/m³

Workers - Dermal; Long term systemic effects: 212 mg/kg/day

PNEC

- 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

2-Methoxy-1-methylethyl acetate (CAS: 108-65-6)

DNEL

Workers - Inhalation; Long term systemic effects: 275 mg/m³

Workers - Inhalation; Short term local effects: 550 mg/m³

Workers - Dermal; Long term systemic effects: 796 mg/kg/day

PNEC

Fresh water; 0.635 mg/l

Intermittent release; 6.35 mg/l

marine water; 0.064 mg/l

STP; 100 mg/l

Sediment (Freshwater); 3.29 mg/kg

Sediment (Marinewater); 0.329 mg/kg

Soil; 0.29 mg/kg

Solvent naphtha (petroleum), light arom. (CAS: 64742-95-6)

DNEL

Workers - Inhalation; Long term systemic effects: 1286.4 mg/m³

Workers - Inhalation; Long term local effects: 837.5 mg/m³

Fatty acids, C14-18 and C16-18-unsatd., maleated (CAS: 85711-46-2)

DNEL

Workers - Dermal; Long term systemic effects: 3.33 mg/kg/day

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PNEC

STP; 100 mg/l

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

This product must not be handled in a confined space without adequate ventilation. Use only outdoors or in a well-ventilated area. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Wear approved safety goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

To protect hands from chemicals, gloves should comply with European Standard EN374. Recommendations for gloves:

Polychloroprene - CR: thickness ≥ 0.5 mm; breakthrough time ≥ 480 min.

Nitrile rubber - NBR: thickness ≥ 0.35 mm; breakthrough time ≥ 480 min.

Butyl rubber - IIR: thickness ≥ 0.5 mm; breakthrough time ≥ 480 min.

Fluorinated rubber - FKM: thickness ≥ 0.4 mm; breakthrough time ≥ 480 min.

Other skin and body protection

May cause skin sensitisation or allergic reactions in sensitive individuals. Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures

Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

Respiratory protection

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to EN14387.

Environmental exposure controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Viscous liquid.
Colour	Various colours.
Odour	Characteristic.
Odour threshold	No data available.
pH	No data available.
Melting point	No data available.
Initial boiling point and range	No data available.
Flash point	45°C / 113°F Method:
Evaporation rate	No data available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	No data available.

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Vapour pressure	No data available.
Vapour density	No data available.
Relative density	1.25
Solubility(ies)	Insoluble in water.
Partition coefficient	No data available.
Auto-ignition temperature	No data available.
Decomposition Temperature	No data available.
Viscosity	4000 cP @ °C
Explosive properties	No data available.
Oxidising properties	No data available.

9.2. Other information

Other information	Not available.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	This material react with certain agents under certain conditions - see Section 10.5.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	The following materials may react strongly with the product: Oxidising agents.
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10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition. Containers can burst violently or explode when heated, due to excessive pressure build-up. Static electricity and formation of sparks must be prevented.
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10.5. Incompatible materials

Materials to avoid	Oxidising materials. Acids - oxidising.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects	There are no data available on this product.
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Acute toxicity - oral

Summary	Based on available data the classification criteria are not met.
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Acute toxicity - dermal

Summary	Based on available data the classification criteria are not met.
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ATE dermal (mg/kg)	29,255.32
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Acute toxicity - inhalation

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

ATE inhalation (vapours mg/l) 292.55

Skin corrosion/irritation

Skin corrosion/irritation Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

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

Skin sensitisation

Skin sensitisation Skin Sens. 1 May cause an allergic skin reaction.

Germ cell mutagenicity

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

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE 3 - H335, H336 May cause respiratory irritation. May cause drowsiness or dizziness.

Target organs Respiratory system, lungs Central nervous system

Specific target organ toxicity - repeated exposure

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

Aspiration hazard

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

General information

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation

A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing. Vapours may cause headache, fatigue, dizziness and nausea. Central nervous system depression.

Ingestion

May cause sensitisation or allergic reactions in sensitive individuals.

Skin contact

May cause skin sensitisation or allergic reactions in sensitive individuals.

Eye contact

No specific symptoms known.

Acute and chronic health hazards

May cause an allergic skin reaction. May cause respiratory irritation. May cause drowsiness or dizziness.

Route of exposure

Ingestion Inhalation Skin and/or eye contact

Target organs

Central nervous system Respiratory system, lungs

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Medical considerations Skin disorders and allergies.

Toxicological information on ingredients.

Hydrocarbons, C9, aromatics

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 3,592.0

Species Rat

ATE oral (mg/kg) 3,592.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 3,160.0

Species Rabbit

ATE dermal (mg/kg) 3,160.0

Skin corrosion/irritation

Skin corrosion/irritation Conclusive data but not sufficient for classification.

Animal data OECD 404 Acute dermal irritation / corrosion: Mildly irritating (rabbit)

Serious eye damage/irritation

Summary Conclusive data but not sufficient for classification.

Serious eye damage/irritation OECD 405 Acute Eye Irritation / Corrosion: Non-irritant (rabbit).

Skin sensitisation

Summary Conclusive data but not sufficient for classification.

Skin sensitisation Not sensitising (OECD 406, Guinea Pig Maximisation Test)

Germ cell mutagenicity

Summary Conclusive data but not sufficient for classification.

Genotoxicity - in vitro Negative.

Genotoxicity - in vivo Negative (OECD 475, Mammalian Bone Marrow Chromosome Aberration Test)

Specific target organ toxicity - single exposure

Summary May cause respiratory irritation. May cause drowsiness or dizziness.

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

2-Methoxy-1-methylethyl acetate

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 6,190.0

Species Rat

ATE oral (mg/kg) 6,190.0

PART A of the two component product, ARBOFLEX 2C TOP COAT PART A / PART B**Acute toxicity - dermal**

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

Species Rabbit

ATE dermal (mg/kg) 5,000.0

Skin corrosion/irritation

Summary Conclusive data but not sufficient for classification.

Skin corrosion/irritation OECD 404 Acute dermal irritation / corrosion: Not irritating (rabbit)

Serious eye damage/irritation

Summary Conclusive data but not sufficient for classification.

Serious eye damage/irritation OECD 405 Acute Eye Irritation / Corrosion: Non-irritant (rabbit).

Skin sensitisation

Summary Conclusive data but not sufficient for classification.

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

Germ cell mutagenicity

Summary Conclusive data but not sufficient for classification.

Genotoxicity - in vitro Bacterial reverse mutation test: Negative.

Specific target organ toxicity - single exposure

Summary May cause drowsiness or dizziness.

Solvent naphtha (petroleum), light arom.**Acute toxicity - oral**

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

Species Rat

ATE oral (mg/kg) 5,000.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 5.61

Species Rat

ATE inhalation (dusts/mists mg/l) 5.61

Skin corrosion/irritation

Summary Causes skin irritation.

Animal data Skin irritant (rabbit, OECD Guideline 404 (Acute Dermal Irritation / Corrosion))

Serious eye damage/irritation

Summary Conclusive data but not sufficient for classification.

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Serious eye damage/irritation	OECD 405 Acute Eye Irritation / Corrosion: Non-irritant (rabbit).
<u>Skin sensitisation</u>	
Summary	Conclusive data but not sufficient for classification.
Skin sensitisation	Not sensitising (OECD 406, Guinea Pig Buehler test)
<u>Germ cell mutagenicity</u>	
Summary	Conclusive data but not sufficient for classification.
Genotoxicity - in vitro	Bacterial reverse mutation test: Negative. Gene mutation: Negative.
Genotoxicity - in vivo	Mammalian erythrocyte micronucleus test: Negative.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	May cause drowsiness or dizziness.
<u>Aspiration hazard</u>	
Summary	May be fatal if swallowed and enters airways.
	<u>Fatty acids, C14-18 and C16-18-unsatd., maleated</u>
<u>Acute toxicity - oral</u>	
Summary	Conclusive data but not sufficient for classification. LD50 Oral: > 2000 mg/kg Rat
<u>Acute toxicity - dermal</u>	
Summary	Conclusive data but not sufficient for classification. LD50 Dermal: > 2000 mg/kg Rat
<u>Acute toxicity - inhalation</u>	
Summary	Data lacking.
<u>Skin corrosion/irritation</u>	
Summary	Causes skin irritation.
Skin corrosion/irritation	Skin irritant (rabbit, OECD Guideline 404 (Acute Dermal Irritation / Corrosion))
<u>Serious eye damage/irritation</u>	
Summary	Causes serious eye irritation.
Serious eye damage/irritation	OECD 405 Acute eye irritation / corrosion: Irritating (rabbit)
<u>Respiratory sensitisation</u>	
Summary	Data lacking.
<u>Skin sensitisation</u>	
Summary	May cause an allergic skin reaction.
<u>Germ cell mutagenicity</u>	
Summary	Conclusive data but not sufficient for classification.
Genotoxicity - in vitro	Ames test: Negative.
Genotoxicity - in vivo	Mammalian erythrocyte micronucleus test: Negative.
<u>Carcinogenicity</u>	
Summary	Data lacking.

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Ethylbenzene

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 11.0

SECTION 12: Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

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 Aquatic Chronic 2 Toxic to aquatic life with long lasting effects.

Ecological information on ingredients.

Hydrocarbons, C9, aromatics

Acute aquatic toxicity

Acute toxicity - fish LL₅₀, 96 hours: 9.2 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EL₅₀, 48 hours: 3.2 mg/l, Daphnia magna

Chronic aquatic toxicity

Chronic toxicity - fish early life stage Estimated freshwater fish 28-day NOELR value is 1.228 mg/l based on growth.

Chronic toxicity - aquatic invertebrates Estimated freshwater invertebrate 21-day NOELR value is 2.14mg/l based on reproduction.

2-Methoxy-1-methylethyl acetate

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 134 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >500 mg/l, Daphnia magna

Acute toxicity - aquatic plants ErC₅₀, 96 hours: >1000 mg/l, Pseudokirchneriella subcapitata

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEC, 14 days: 47.5 mg/l, Oryzias latipes (Red killifish)

Chronic toxicity - aquatic invertebrates NOEC, 21 days: >=100 mg/l, Daphnia magna

Solvent naphtha (petroleum), light arom.

Acute aquatic toxicity

Acute toxicity - fish LL₅₀, 96 hours: 10 mg/l, Oncorhynchus mykiss (Rainbow trout)

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Acute toxicity - aquatic invertebrates	EL50, 48 hours: 4.5 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EL50, 72 hours: 3.1 mg/l, Pseudokirchneriella subcapitata
<u>Chronic aquatic toxicity</u>	
Chronic toxicity - aquatic invertebrates	NOELR, 21 days: 2.6 mg/l, Daphnia magna
<u>Fatty acids, C14-18 and C16-18-unsatd., maleated</u>	
<u>Acute aquatic toxicity</u>	
Acute toxicity - fish	LL ₅₀ , 96 hours: >=100 mg/l, Brachydanio rerio (Zebra Fish)
Acute toxicity - aquatic invertebrates	EL50, 48 hours: >100 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Ecological information on ingredients.

2-Methoxy-1-methylethyl acetate

Biodegradation	The substance is readily biodegradable. - Degradation 83%: 28 days
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Fatty acids, C14-18 and C16-18-unsatd., maleated

Biodegradation	Not readily biodegradable.
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12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No data 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	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. Do not reuse empty containers. Do not empty into drains.
Waste class	HP3 Flammable HP5 STOT / Aspiration toxicity HP13 Sensitising HP14 Ecotoxic Recommended EWC Code 08 01 11*

PART A of the two component product, ARBOFLEX 2C TOP COAT PART A / PART B

SECTION 14: Transport information

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 (hydrocarbons, C9, aromatics)
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



14.6. Special precautions for user

EmS	F-E, S-E
ADR transport category	3
Emergency Action Code	•3Y

PART A of the two component product, ARBOFLEX 2C TOP COAT PART A / PART B

Hazard Identification Number 30
(ADR/RID)

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.

SECTION 15: Regulatory information

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

National regulations	The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. 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.
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). 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).
Authorisations (Annex XIV Regulation 1907/2006)	None of the substances in the product are listed.
Restrictions (Annex XVII Regulation 1907/2006)	No relevant restrictions.
Seveso Directive - Control of major accident hazards	P5c Lower-tier 5000 tonnes Upper-tier 50000 tonnes. E2 Lower-tier 200 tonnes Upper-tier 500 tonnes.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

PART A of the two component product, ARBOFLEX 2C TOP COAT PART A / PART B

Abbreviations and acronyms used in the safety data sheet	<p>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</p> <p>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</p> <p>RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.</p> <p>IATA: International Air Transport Association.</p> <p>ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.</p> <p>IMDG: International Maritime Dangerous Goods.</p> <p>CAS: Chemical Abstracts Service.</p> <p>ATE: Acute Toxicity Estimate.</p> <p>LC₅₀: Lethal Concentration to 50 % of a test population.</p> <p>LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).</p> <p>EC₅₀: 50% of maximal Effective Concentration.</p> <p>PBT: Persistent, Bioaccumulative and Toxic substance.</p> <p>vPvB: Very Persistent and Very Bioaccumulative.</p>
Classification abbreviations and acronyms	<p>Flam. Liq. = Flammable liquid</p> <p>Skin Sens. = Skin sensitisation</p> <p>STOT SE = Specific target organ toxicity-single exposure</p> <p>Aquatic Chronic = Hazardous to the aquatic environment (chronic)</p>
Key literature references and sources for data	Raw material suppliers SDS. Source: European Chemicals Agency, http://echa.europa.eu/
Classification procedures according to Regulation (EC) 1272/2008	STOT SE 3 - H335, H336: Skin Sens. 1 - H317: : Calculation method. Aquatic Chronic 2 - H411: : Calculation method. Flam. Liq. 3 - H226: : On basis of test data.
Training advice	Only trained personnel should use this material.
Revision date	19/11/2021
Revision	1
SDS number	20442
SDS status	Approved.
Hazard statements in full	<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>H336 May cause drowsiness or dizziness.</p> <p>H373 May cause damage to organs through prolonged or repeated exposure.</p> <p>H411 Toxic to aquatic life with long lasting effects.</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.