

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
Trade name : FyreWrap® LiB G2 Coating
UFI : QDA5-E15R-5001-WUVA

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Main use category : Industrial use
Use of the substance/mixture : For industrial use within high temperature applications.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet**Supplier**

Alkegen (formerly Unifrax)
Mill Lane, Rainford
UK– WA11 8LP St Helens, Merseyside
United Kingdom
T + 44 (0) 1744 88 7600 - F + 44 (0) 1744 88 9916

Distributor

Alkegen (formerly Unifrax)
Kleinreinsdorf 62
DE– 07989 Teichwolframsdorf
Germany
T + 49 (0) 366 24 40020 - F + 49 (0) 366 24 40099

Distributor

Alkegen (formerly Unifrax)
Shaftsbury Street
DE23 8XA Derby
United Kingdom
T +44 (0) 1332 331808

Distributor

Alkegen (formerly Unifrax)
Via Volonterio 19
21047 Saronno (VA)
Italy
T +39 02 967 01 808 - F +39 02 962 5721

Email competent person

reachsds@alkegen.com

Distributor

Alkegen (formerly Unifrax)
17 Rue Antoine Durafour
42420 Lorette
France
T +33 (0) 477 737 032 - F +33 (0) 477 733 991

Distributor

Alkegen (formerly Unifrax)
Ruská 311, Pozorka
CZ– 417 03 Dubí 3
Czech Republic
T + 42 (0) 417 800 356 - F + 42 (0) 417 539 838

Distributor

Alkegen (formerly Unifrax)
Cristobal Bordiu 20
ES– 28003 Madrid
Spain
T + 34 91 395 2279 - F + 34 91 395 2124

1.4. Emergency telephone number

Emergency number : Occupational Hygiene and CARE: Tel: + 44 (0) 1744 887603; Email: reachsds@alkegen.com; (8.15-17.10 h); Language : English

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Skin sensitisation, Category 1 H317
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

May cause an allergic skin reaction.

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)

:



GHS07

Signal word (CLP)

: Warning

Contains

: 2-methyl-2H-isothiazol-3-one, 1,2-benzisothiazol-3(2H)-one

Hazard statements (CLP)

: H317 - May cause an allergic skin reaction.

Precautionary statements (CLP)

: P261 - Avoid breathing mist, vapours, spray.

P280 - Wear protective gloves, protective clothing, eye protection.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

2.3. Other hazards

PBT: not relevant – no registration required

vPvB: not relevant – no registration required

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

| Component | |
|--|---|
| xylene (1330-20-7) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
| titanium dioxide (13463-67-7) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
| 2-methylpropan-1-ol (78-83-1) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
| ethylbenzene (100-41-4) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
| methanol (67-56-1) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
| 2-methyl-2H-isothiazol-3-one (2682-20-4) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
| 1,2-benzisothiazol-3(2H)-one (2634-33-5) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|--|--|----------------|--|
| xylene substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit (Note C) | CAS-No.: 1330-20-7 EC-No.: 215-535-7 EC Index-No.: 601-022-00-9 | ≥ 1 – < 2.5 | Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 (ATE=1100 mg/kg bodyweight) Acute Tox. 4 (Inhalation), H332 (ATE=11 mg/l/4h) Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 3, H412 |
| titanium dioxide substance with national workplace exposure limit(s) (GB) | CAS-No.: 13463-67-7 EC-No.: 236-675-5 | ≥ 1 – < 2.5 | Not classified |
| 2-methylpropan-1-ol substance with national workplace exposure limit(s) (GB) | CAS-No.: 78-83-1 EC-No.: 201-148-0 EC Index-No.: 603-108-00-1 | ≥ 0.25 – < 1 | Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336 STOT SE 3, H335 |
| ethylbenzene substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit | CAS-No.: 100-41-4 EC-No.: 202-849-4 EC Index-No.: 601-023-00-4 | ≥ 0.25 – < 1 | Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation:vapour), H332 (ATE=17.8 mg/l/4h) STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 3, H412 |
| methanol substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit | CAS-No.: 67-56-1 EC-No.: 200-659-6 EC Index-No.: 603-001-00-X | ≥ 0.1 – < 0.25 | Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 (ATE=100 mg/kg bodyweight) Acute Tox. 3 (Dermal), H311 (ATE=300 mg/kg bodyweight) Acute Tox. 3 (Inhalation:vapour), H331 (ATE=3 mg/l/4h) STOT SE 1, H370 |
| 2-methyl-2H-isothiazol-3-one | CAS-No.: 2682-20-4 EC-No.: 220-239-6 EC Index-No.: 613-326-00-9 REACH-no: 01-2120764690-50-xxxx | < 0.1 | Acute Tox. 2 (Inhalation), H330 (ATE=0.1 mg/l/4h) Acute Tox. 3 (Dermal), H311 (ATE=242 mg/kg bodyweight) Acute Tox. 3 (Oral), H301 (ATE=120 mg/kg bodyweight) Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 EUH071 |
| 1,2-benzisothiazol-3(2H)-one | CAS-No.: 2634-33-5 EC-No.: 220-120-9 EC Index-No.: 613-088-00-6 REACH-no: 01-2120761540-60-xxxx | < 0.1 | Acute Tox. 4 (Oral), H302 (ATE=670 mg/kg bodyweight) Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 2, H411 |

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| Specific concentration limits: | | |
|--------------------------------|--|--|
| Name | Product identifier | Specific concentration limits |
| methanol | CAS-No.: 67-56-1 EC-No.: 200-659-6 EC Index-No.: 603-001-00-X | (3 ≤C < 10) STOT SE 2, H371 (10 ≤C < 100) STOT SE 1, H370 |
| 2-methyl-2H-isothiazol-3-one | CAS-No.: 2682-20-4 EC-No.: 220-239-6 EC Index-No.: 613-326-00-9 REACH-no: 01-2120764690-50-xxxx | (0.0015 ≤C ≤ 100) Skin Sens. 1A, H317 |
| 1,2-benzisothiazol-3(2H)-one | CAS-No.: 2634-33-5 EC-No.: 220-120-9 EC Index-No.: 613-088-00-6 REACH-no: 01-2120761540-60-xxxx | (0.05 ≤C < 100) Skin Sens. 1, H317 |

Note C : Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|--|
| First-aid measures general | : In all cases of doubt, or when symptoms persist, seek medical attention. |
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. |
| First-aid measures after skin contact | : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention. |
| First-aid measures after eye contact | : Rinse eyes with water as a precaution. Remove contact lenses, if present and easy to do. Continue rinsing. |
| First-aid measures after ingestion | : Rinse mouth. Do not induce vomiting. Call a poison center or a doctor if you feel unwell. |

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

| | |
|-------------------------------------|--|
| Symptoms/effects after skin contact | : May cause an allergic skin reaction. |
|-------------------------------------|--|

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|--|
| Suitable extinguishing media | : Use extinguishing media appropriate for surrounding fire. Water spray. Dry powder. Foam. Carbon dioxide. |
| Unsuitable extinguishing media | : Strong water jet. |

5.2. Special hazards arising from the substance or mixture

| | |
|--|---|
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. Carbon monoxide. Carbon dioxide. |
|--|---|

5.3. Advice for firefighters

| | |
|--------------------------------|--|
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. |
| Other information | : Do not allow run-off from fire fighting to enter drains or water courses. Disposal must be done according to official regulations. |

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Concerning personal protective equipment to use, see section 8.
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing mist, vapours, spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid sub-soil penetration. Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.
Other information : Disposal must be done according to official regulations.

6.4. Reference to other sections

Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing mist.
Hygiene measures : Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.
Information about storage in one common storage facility : Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

| xylene (1330-20-7) | |
|--|---------------------------------|
| EU - Indicative Occupational Exposure Limit (IOEL) | |
| Local name | Xylene, mixed isomers, pure |
| IOEL TWA | 221 mg/m ³ |
| IOEL TWA [ppm] | 50 ppm |
| IOEL STEL | 442 mg/m ³ |
| IOEL STEL [ppm] | 100 ppm |
| Remark | Skin |
| Regulatory reference | COMMISSION DIRECTIVE 2000/39/EC |

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| | |
|---|---|
| United Kingdom - Occupational Exposure Limits | |
| Local name | Xylene |
| WEL TWA (OEL TWA) [1] | 220 mg/m ³ o-,m-,p- or mixed isomers |
| WEL TWA (OEL TWA) [2] | 50 ppm o-,m-,p- or mixed isomers |
| WEL STEL (OEL STEL) | 441 mg/m ³ o-,m-,p- or mixed isomers |
| WEL STEL (OEL STEL) [ppm] | 100 ppm o-,m-,p- or mixed isomers |
| Remark | Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity) |
| Regulatory reference | EH40/2005 (Fourth edition, 2020). HSE |
| United Kingdom - Biological limit values | |
| Local name | Xylene, o-, m-, p- or mixed isomers |
| BMGV | 650 mmol/mol Creatinine Parameter: methyl hippuric acid - Medium: urine - Sampling time: Post shift |
| Regulatory reference | EH40/2005 (Fourth edition, 2020). HSE |
| titanium dioxide (13463-67-7) | |
| United Kingdom - Occupational Exposure Limits | |
| Local name | Titanium dioxide |
| WEL TWA (OEL TWA) [1] | 4 mg/m ³ respirable 10 mg/m ³ total inhalable |
| Regulatory reference | EH40/2005 (Fourth edition, 2020). HSE |
| 2-methylpropan-1-ol (78-83-1) | |
| United Kingdom - Occupational Exposure Limits | |
| Local name | 2-Methylpropan-1-ol |
| WEL TWA (OEL TWA) [1] | 154 mg/m ³ |
| WEL TWA (OEL TWA) [2] | 50 ppm |
| WEL STEL (OEL STEL) | 231 mg/m ³ |
| WEL STEL (OEL STEL) [ppm] | 75 ppm |
| Regulatory reference | EH40/2005 (Fourth edition, 2020). HSE |
| ethylbenzene (100-41-4) | |
| EU - Indicative Occupational Exposure Limit (IOEL) | |
| Local name | Ethylbenzene |
| IOEL TWA | 442 mg/m ³ |
| IOEL TWA [ppm] | 100 ppm |
| IOEL STEL | 884 mg/m ³ |
| IOEL STEL [ppm] | 200 ppm |
| Remark | Skin |
| Regulatory reference | COMMISSION DIRECTIVE 2000/39/EC |
| United Kingdom - Occupational Exposure Limits | |
| Local name | Ethylbenzene |
| WEL TWA (OEL TWA) [1] | 441 mg/m ³ |

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| | |
|---------------------------|---|
| WEL TWA (OEL TWA) [2] | 100 ppm |
| WEL STEL (OEL STEL) | 552 mg/m ³ |
| WEL STEL (OEL STEL) [ppm] | 125 ppm |
| Remark | Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity) |
| Regulatory reference | EH40/2005 (Fourth edition, 2020). HSE |

methanol (67-56-1)

EU - Indicative Occupational Exposure Limit (IOEL)

| | |
|----------------------|---------------------------------|
| Local name | Methanol |
| IOEL TWA | 260 mg/m ³ |
| IOEL TWA [ppm] | 200 ppm |
| Remark | Skin |
| Regulatory reference | COMMISSION DIRECTIVE 2006/15/EC |

United Kingdom - Occupational Exposure Limits

| | |
|---------------------------|---|
| Local name | Methanol |
| WEL TWA (OEL TWA) [1] | 266 mg/m ³ |
| WEL TWA (OEL TWA) [2] | 200 ppm |
| WEL STEL (OEL STEL) | 333 mg/m ³ |
| WEL STEL (OEL STEL) [ppm] | 250 ppm |
| Remark | Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity) |
| Regulatory reference | EH40/2005 (Fourth edition, 2020). HSE |

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

xylene (1330-20-7)

DNEL/DMEL (Workers)

| | |
|--|--------------------------|
| Acute - systemic effects, inhalation | 442 mg/m ³ |
| Acute - local effects, inhalation | 442 mg/m ³ |
| Long-term - systemic effects, dermal | 212 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 221 mg/m ³ |
| Long-term - local effects, inhalation | 221 mg/m ³ |

DNEL/DMEL (General population)

| | |
|--|---------------------------|
| Acute - systemic effects, inhalation | 260 mg/m ³ |
| Acute - local effects, inhalation | 260 mg/m ³ |
| Long-term - systemic effects, oral | 12.5 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 65.3 mg/m ³ |
| Long-term - systemic effects, dermal | 125 mg/kg bodyweight/day |
| Long-term - local effects, inhalation | 65.3 mg/m ³ |

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| | |
|--|--------------------------|
| PNEC (Water) | |
| PNEC aqua (freshwater) | 0.327 mg/l |
| PNEC aqua (marine water) | 0.327 mg/l |
| PNEC aqua (intermittent, freshwater) | 0.327 mg/l |
| PNEC (Sediment) | |
| PNEC sediment (freshwater) | 12.46 mg/kg dwt |
| PNEC sediment (marine water) | 12.46 mg/kg dwt |
| PNEC (Soil) | |
| PNEC soil | 2.31 mg/kg dwt |
| PNEC (STP) | |
| PNEC sewage treatment plant | 6.58 mg/l |
| 2-methylpropan-1-ol (78-83-1) | |
| DNEL/DMEL (Workers) | |
| Long-term - local effects, inhalation | 310 mg/m ³ |
| DNEL/DMEL (General population) | |
| Long-term - local effects, inhalation | 55 mg/m ³ |
| methanol (67-56-1) | |
| DNEL/DMEL (Workers) | |
| Acute - systemic effects, dermal | 20 mg/kg bodyweight/day |
| Acute - systemic effects, inhalation | 130 mg/m ³ |
| Acute - local effects, inhalation | 130 mg/m ³ |
| Long-term - systemic effects, dermal | 20 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 130 mg/m ³ |
| Long-term - local effects, inhalation | 130 mg/m ³ |
| DNEL/DMEL (General population) | |
| Acute - systemic effects, dermal | 4 mg/kg bodyweight |
| Acute - systemic effects, inhalation | 26 mg/m ³ |
| Acute - systemic effects, oral | 4 mg/kg bodyweight |
| Acute - local effects, inhalation | 26 mg/m ³ |
| Long-term - systemic effects, oral | 4 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 26 mg/m ³ |
| Long-term - systemic effects, dermal | 4 mg/kg bodyweight/day |
| Long-term - local effects, inhalation | 26 mg/m ³ |
| tin dioxide (18282-10-5) | |
| DNEL/DMEL (Workers) | |
| Acute - systemic effects, dermal | 5.7 mg/kg bodyweight/day |
| Acute - systemic effects, inhalation | 2 mg/m ³ |
| Long-term - systemic effects, dermal | 5.7 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 2 mg/m ³ |

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| | |
|---|----------------------------|
| DNEL/DMEL (General population) | |
| Acute - systemic effects, dermal | 2 mg/kg bodyweight |
| Acute - systemic effects, inhalation | 6 mg/m ³ |
| Acute - systemic effects, oral | 2 mg/kg bodyweight |
| Long-term - systemic effects, oral | 2 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 6 mg/m ³ |
| Long-term - systemic effects, dermal | 2 mg/kg bodyweight/day |
| PNEC (Water) | |
| PNEC aqua (freshwater) | 0.1 mg/l |
| PNEC aqua (marine water) | 0.01 mg/l |
| PNEC (STP) | |
| PNEC sewage treatment plant | 100 mg/l |
| 2-methyl-2H-isothiazol-3-one (2682-20-4) | |
| DNEL/DMEL (Workers) | |
| Acute - local effects, inhalation | 0.043 mg/m ³ |
| Long-term - local effects, inhalation | 0.021 mg/m ³ |
| DNEL/DMEL (General population) | |
| Acute - systemic effects, oral | 0.053 mg/kg bodyweight/day |
| Acute - local effects, inhalation | 0.043 mg/m ³ |
| Long-term - systemic effects, oral | 0.027 mg/kg bodyweight/day |
| Long-term - local effects, inhalation | 0.021 mg/m ³ |
| PNEC (Water) | |
| PNEC aqua (freshwater) | 3.39 µg/L |
| PNEC aqua (marine water) | 3.39 µg/L |
| PNEC aqua (intermittent, freshwater) | 3.39 µg/L |
| PNEC aqua (intermittent, marine water) | 3.39 µg/L |
| PNEC (Soil) | |
| PNEC soil | 0.047 mg/kg dwt |
| PNEC (STP) | |
| PNEC sewage treatment plant | 0.23 mg/l |
| 1,2-benzisothiazol-3(2H)-one (2634-33-5) | |
| DNEL/DMEL (Workers) | |
| Long-term - systemic effects, dermal | 0.966 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 6.81 mg/m ³ |
| DNEL/DMEL (General population) | |
| Long-term - systemic effects, inhalation | 1.2 mg/m ³ |
| Long-term - systemic effects, dermal | 0.345 mg/kg bodyweight/day |
| PNEC (Water) | |
| PNEC aqua (freshwater) | 4.03 µg/L |
| PNEC aqua (marine water) | 0.403 µg/L |

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| | |
|--|---------------|
| PNEC aqua (intermittent, freshwater) | 1.1 µg/L |
| PNEC aqua (intermittent, marine water) | 0.11 µg/L |
| PNEC (Sediment) | |
| PNEC sediment (freshwater) | 49.9 µg/kg dw |
| PNEC sediment (marine water) | 4.99 µg/kg dw |
| PNEC (Soil) | |
| PNEC soil | 3 mg/kg dw |
| PNEC (STP) | |
| PNEC sewage treatment plant | 1.03 mg/l |

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Safety glasses with side shields

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Chemically resistant protective gloves. Nitrile rubber. EN 374. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear

8.2.2.3. Respiratory protection

Respiratory protection:

Liquid product : Inhalation unlikely. If dust are formed : Wear appropriate mask, Particle filter, P2. EN 149

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Always wash hands after handling the product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|-----------------|------------------|
| Physical state | : Liquid |
| Colour | : Grey. |
| Appearance | : Suspension. |
| Odour | : Not available |
| Odour threshold | : Not available |
| Melting point | : Not applicable |
| Freezing point | : Not available |

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| | |
|---|------------------|
| Boiling point | : Not available |
| Flammability | : Not applicable |
| Explosive properties | : Not explosive. |
| Oxidising properties | : Non oxidizing. |
| Explosive limits | : Not available |
| Lower explosion limit | : Not available |
| Upper explosion limit | : Not available |
| Flash point | : Not available |
| Auto-ignition temperature | : Not available |
| Decomposition temperature | : Not available |
| pH | : Not available |
| Viscosity, kinematic | : Not available |
| Solubility | : Not available |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Vapour pressure | : Not available |
| Vapour pressure at 50°C | : Not available |
| Density | : Not available |
| Relative density | : Not available |
| Relative vapour density at 20°C | : Not available |
| Particle characteristics | : Not applicable |

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

| | |
|-----------------------------|---|
| Acute toxicity (oral) | : Not classified (Based on available data, the classification criteria are not met) |
| Acute toxicity (dermal) | : Not classified (Based on available data, the classification criteria are not met) |
| Acute toxicity (inhalation) | : Not classified (Based on available data, the classification criteria are not met) |

| FyreWrap® LiB G2 Coating | |
|--------------------------|-------------------------|
| ATE CLP (oral) | > 5000 mg/kg bodyweight |
| ATE CLP (dermal) | > 5000 mg/kg bodyweight |

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| | |
|-----------------------------------|---|
| ATE CLP (dust,mist) | > 10 mg/l/4h |
| Skin corrosion/irritation | : Not classified (Based on available data, the classification criteria are not met) |
| Serious eye damage/irritation | : Not classified (Based on available data, the classification criteria are not met) |
| Respiratory or skin sensitisation | : May cause an allergic skin reaction. |
| Germ cell mutagenicity | : Not classified (Based on available data, the classification criteria are not met) |
| Carcinogenicity | : Not classified (Based on available data, the classification criteria are not met) |
| Reproductive toxicity | : Not classified (Based on available data, the classification criteria are not met) |
| STOT-single exposure | : Not classified (Based on available data, the classification criteria are not met) |
| STOT-repeated exposure | : Not classified (Based on available data, the classification criteria are not met) |
| Aspiration hazard | : Not classified (Based on available data, the classification criteria are not met) |

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

| | |
|---|---|
| Hazardous to the aquatic environment, short-term (acute) | : Not classified (Based on available data, the classification criteria are not met) |
| Hazardous to the aquatic environment, long-term (chronic) | : Not classified (Based on available data, the classification criteria are not met) |
| Not rapidly degradable | |

| | |
|---|---|
| xylene (1330-20-7) | |
| LC50 - Fish [1] | 2.6 mg/l (96 h; Oncorhynchus mykiss; (OECD 203 method)) |
| EC50 - Crustacea [1] | 2.2 mg/l (24 h; Daphnia magna; (OECD 202 method)) |
| ErC50 algae | 2.2 mg/l (72 h; Pseudokirchneriella subcapitata; (OECD 201 method)) |
| NOEC chronic fish | > 1.3 mg/l (56 d; Oncorhynchus mykiss) |
| NOEC chronic crustacea | 0.96 mg/l (7 d; Ceriodaphnia dubia; US EPA 600/4-91-003) |
| ethylbenzene (100-41-4) | |
| LC50 - Fish [1] | 5.1 mg/l (96h; Menidia menidia) |
| LC50 - Fish [2] | 4.2 mg/l (96; Oncorhynchus mykiss (Rainbow trout); (OECD 203 method)) |
| EC50 - Crustacea [1] | 1.8 – 2.4 mg/l (48h; Daphnia magna) |
| EC50 72h algae | 4.9 mg/l (72h; Skeletonema costatum) |
| EC50 72h - Algae [2] | 5.2 mg/l (72h; Pseudokirchnerella subcapitata) |
| ErC50 algae | 4.9 mg/l (72h; Skeletonema costatum) |
| NOEC chronic crustacea | 0.96 mg/l (7d; Ceriodaphnia dubia) |
| 2-methyl-2H-isothiazol-3-one (2682-20-4) | |
| LC50 - Fish [1] | 4.77 mg/l (96 h; Oncorhynchus mykiss; (OECD 203 method)) |
| EC50 - Crustacea [1] | 0.934 mg/l (48 h; Daphnia magna; (OECD 202 method)) |
| EC50 72h algae | 0.103 mg/l (72 h, Pseudokirchneriella Subcapita; (OECD 201 method)) |
| ErC50 algae | 0.072 mg/l (OECD 201 method) |
| NOEC chronic fish | 4.93 mg/l (98 d; Oncorhynchus mykiss; (OECD 210 method)) |
| NOEC chronic crustacea | 0.044 mg/l (21 d; Daphnia magna; (OECD 211 method)) |
| NOEC chronic algae | 0.05 mg/l (5 d; Pseudokirchneriella subcapitata; (OECD 201 method)) |

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| 1,2-benzisothiazol-3(2H)-one (2634-33-5) | |
|---|--|
| LC50 - Fish [1] | 2.18 mg/l (96 h; Onchorhynchus mykiss, OECD 203) |
| EC50 - Crustacea [1] | 2.94 mg/l (48 h; Daphnia magna; OECD 202) |
| ErC50 algae | 0.15 mg/l (72 h; Pseudokirchneriella subcapitata; OECD 201) |
| NOEC chronic algae | 0.055 mg/l (72 h; Pseudokirchneriella subcapitata; OECD 201) |

12.2. Persistence and degradability

| xylene (1330-20-7) | |
|---|--|
| Persistence and degradability | Readily biodegradable. |
| titanium dioxide (13463-67-7) | |
| Persistence and degradability | Not applicable for inorganic substances. |
| 2-methylpropan-1-ol (78-83-1) | |
| Persistence and degradability | Readily biodegradable. |
| Biodegradation | 70 – 80 % (28 d; (OECD 301D method)) |
| ethylbenzene (100-41-4) | |
| Persistence and degradability | Readily biodegradable. |
| Biodegradation | 70 – 80 % (28d; ISO 14593-CO2-Headspace Test) |
| methanol (67-56-1) | |
| Persistence and degradability | Readily biodegradable. |
| Biodegradation | 95 % (20 d) |
| 2-methyl-2H-isothiazol-3-one (2682-20-4) | |
| Persistence and degradability | Not readily biodegradable. (OECD 301B method). (OECD 301D method). |
| 1,2-benzisothiazol-3(2H)-one (2634-33-5) | |
| Persistence and degradability | Not readily biodegradable. |
| Biodegradation | 85 % (63 d; (OECD 301C method)) |

12.3. Bioaccumulative potential

| 2-methyl-2H-isothiazol-3-one (2682-20-4) | |
|---|---------------------------------------|
| Partition coefficient n-octanol/water (Log Pow) | -0.486 (25 °C; (OECD 107 method)) |
| Bioaccumulative potential | Bioaccumulation unlikely. |
| 1,2-benzisothiazol-3(2H)-one (2634-33-5) | |
| BCF - Fish [1] | 6.95 (OECD 305 method) |
| Partition coefficient n-octanol/water (Log Kow) | 0.7 (20 °C; pH 7; Test method EU A.8) |

12.4. Mobility in soil

| 2-methylpropan-1-ol (78-83-1) | |
|--|---|
| Surface tension | 69.7 mN/m (20 °C; 1 g/L; (OECD 115 method)) |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 0.47 (calculated value) |
| 2-methyl-2H-isothiazol-3-one (2682-20-4) | |
| Surface tension | 68.8 mN/m (19 °C, EEC Method A5) |

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| | |
|----------------|----------------------|
| Ecology - soil | Low mobility (soil). |
|----------------|----------------------|

12.5. Results of PBT and vPvB assessment

| |
|---|
| FyreWrap® LiB G2 Coating |
| PBT: not relevant – no registration required |
| vPvB: not relevant – no registration required |

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Disposal must be done according to official regulations. European waste catalogue. Do not dispose of with domestic waste. Do not discharge into drains or the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

| ADR | IMDG | IATA | ADN | RID |
|---|----------------|----------------|----------------|----------------|
| 14.1. UN number or ID number | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.2. UN proper shipping name | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.3. Transport hazard class(es) | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.4. Packing group | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.5. Environmental hazards | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| No supplementary information available | | | | |

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

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Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Other information, restriction and prohibition regulations : Take note of Directive 94/33/EC on the protection of young people at work.

REACH Annex XVII (Restriction List)

| EU restriction list (REACH Annex XVII) | |
|--|---|
| Reference code | Applicable on |
| 3(a) | xylene ; methanol ; 2-methylpropan-1-ol ; ethylbenzene |
| 3(b) | FyreWrap® LiB G2 Coating ; xylene ; methanol ; 2-methylpropan-1-ol ; ethylbenzene |
| 3(c) | xylene ; ethylbenzene |
| 40. | xylene ; methanol ; 2-methylpropan-1-ol ; ethylbenzene |
| 69. | methanol |

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

| Abbreviations and acronyms: | |
|-----------------------------|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |

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| | |
|-------|---|
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC50 | Median effective concentration |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| TLM | Median Tolerance Limit |
| vPvB | Very Persistent and Very Bioaccumulative |

Data sources : MSDS of the supplier. ECHA (European Chemicals Agency).

Other information : Occupational Hygiene: dawn.webster@alkegen.com.

| Full text of H- and EUH-statements: | |
|-------------------------------------|---|
| Acute Tox. 2 (Inhalation) | Acute toxicity (inhal.), Category 2 |
| Acute Tox. 3 (Dermal) | Acute toxicity (dermal), Category 3 |
| Acute Tox. 3 (Inhalation:vapour) | Acute toxicity (inhalation:vapour) Category 3 |
| Acute Tox. 3 (Oral) | Acute toxicity (oral), Category 3 |
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal), Category 4 |
| Acute Tox. 4 (Inhalation) | Acute toxicity (inhal.), Category 4 |
| Acute Tox. 4 (Inhalation:vapour) | Acute toxicity (inhalation:vapour) Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment – Acute Hazard, Category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment – Chronic Hazard, Category 1 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment – Chronic Hazard, Category 2 |

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| | |
|-------------------|--|
| Aquatic Chronic 3 | Hazardous to the aquatic environment – Chronic Hazard, Category 3 |
| Asp. Tox. 1 | Aspiration hazard, Category 1 |
| EUH071 | Corrosive to the respiratory tract. |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Flam. Liq. 2 | Flammable liquids, Category 2 |
| Flam. Liq. 3 | Flammable liquids, Category 3 |
| H225 | Highly flammable liquid and vapour. |
| H226 | Flammable liquid and vapour. |
| H301 | Toxic if swallowed. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| 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. |
| H330 | Fatal if inhaled. |
| H331 | Toxic if inhaled. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H370 | Causes damage to organs. |
| H371 | May cause damage to organs. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1, Sub-Category 1B |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Skin sensitisation, Category 1 |
| Skin Sens. 1A | Skin sensitisation, category 1A |
| STOT RE 2 | Specific target organ toxicity – Repeated exposure, Category 2 |
| STOT SE 1 | Specific target organ toxicity – single exposure, Category 1 |
| STOT SE 2 | Specific target organ toxicity – Single exposure, Category 2 |
| STOT SE 3 | Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation |

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| |
|--|
| Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]: |
|--|

| | | |
|--------------|------|--------------------|
| Skin Sens. 1 | H317 | Calculation method |
|--------------|------|--------------------|

KFT SDS EU 06

The information presented on this SDS (1) provides details on material identity, manufacturer/supplier information, hazard characterization and prevention, emergency response and other specialized information, (2) is considered to be accurate to the best of our knowledge, information and good faith belief as of the date of publication, (3) is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release of the material named, (4) should be read and used in conjunction with the company's relevant literature, (5) relates only to the specific material designated and may not be valid for such material used in combination with any other material or process and (6) is provided without warranty, expressed or implied, in law or in fact, of merchantability or fitness for a particular purpose. This document does not constitute a product specification and should not be relied on as such. Employers may use this SDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product.