

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

Product form : Mixture
 Product name : Filmfoam^{C6} 913 FP
 Product code : 4-AFF-913F
 Type of product : Firefighting foam concentrate (AFFF)

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

Industrial/Professional use spec : Industrial
 For professional use only
 Use of the substance/mixture : Firefighting foam concentrate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Kerr Fire Ltd
 Station Road
 LA2 7NA Bentham - United Kindom
 T +44(0) 1524 264 037
support@kerrfire.co.uk - www.kerrfire.co.uk

1.4. Emergency telephone number

Emergency number : +44(0) 1524 264000 (Standard office hours: Monday to Friday 8:30am - 4:30pm GMT)
 Contact person: EH&S Manager

| Country | Organisation/Company | Address | Emergency number | Comment |
|----------------|---|-----------------------------------|------------------|---------|
| United Kingdom | National Poisons Information Service (Birmingham Centre) City Hospital | Dudley Road B18 7QH Birmingham | 0344 892 0111 | |

SECTION 2: Hazards identification
2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4 H302

Serious eye damage/eye irritation, Category 2 H319

Specific target organ toxicity — Repeated exposure, Category 2 H373

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



Signal word (CLP) : Warning

Hazardous ingredients : Ethane-1,2-diol

Hazard statements (CLP) : H302 - Harmful if swallowed.
 H319 - Causes serious eye irritation.
 H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).

Precautionary statements (CLP) : P264 - Wash hands thoroughly after handling.
 P280 - Wear eye protection, protective clothing, protective gloves
 P301+P312 - IF SWALLOWED: Call a doctor if you feel unwell.
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P314 - Get medical advice/attention if you feel unwell.

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P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

PBT: not relevant – no registration required

vPvB: not relevant – no registration required

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|--|--|---------|---|
| Ethane-1,2-diol | (CAS-No.) 107-21-1 (EC-No.) 203-473-3 (EC Index-No.) 603-027-00-1 (REACH-no) 01-2119456816-28 | 25 - 50 | Acute Tox. 4 (Oral), H302 STOT RE 2, H373 |
| 2-(2-butoxyethoxy)ethanol | (CAS-No.) 112-34-5 (EC-No.) 203-961-6 (EC Index-No.) 603-096-00-8 (REACH-no) 01-2119475104-44 | 4 - 10 | Eye Irrit. 2, H319 |
| D-Glucopyranose, oligomeric, C9-11-alkyl glycosides | (CAS-No.) 132778-08-6 (REACH-no) 01-2119965413-36 | 1 - 4 | Skin Irrit. 2, H315 Eye Dam. 1, H318 |
| 2-methyl-2,4-pentanediol substance with national workplace exposure limit(s) (BE, FR, GB) | (CAS-No.) 107-41-5 (EC-No.) 203-489-0 (EC Index-No.) 603-053-00-3 (REACH-no) 01-2119539582-35 | 0.1 - 1 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 |
| 2-methyl-2-propanol substance with national workplace exposure limit(s) (BE, FR, GB) | (CAS-No.) 75-65-0 (EC-No.) 200-889-7 (EC Index-No.) 603-005-00-1 (REACH-no) 01-2119444321-51 | < 0.1 | Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation:dust,mist), H332 Eye Irrit. 2, H319 STOT SE 3, H335 |
| Ethanol substance with national workplace exposure limit(s) (BE, FR, GB, NL) | (CAS-No.) 64-17-5 (EC-No.) 200-578-6 (EC Index-No.) 603-002-00-5 | < 0.05 | Flam. Liq. 2, H225 Eye Irrit. 2, H319 |

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|--|
| First-aid measures general | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). |
| First-aid measures after inhalation | : Allow affected person to breathe fresh air. Allow the victim to rest. |
| First-aid measures after skin contact | : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion | : Rinse mouth. Immediately call a POISON CENTER/doctor. |

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

| | |
|------------------------------------|--|
| Symptoms/effects | : Causes damage to organs (kidneys) (if swallowed). |
| Symptoms/effects after eye contact | : Causes serious eye irritation. |
| Symptoms/effects after ingestion | : Swallowing a small quantity of this material will result in serious health hazard. |

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 | : No specific measures are necessary. This product is a fire extinguishing medium. |
| Unsuitable extinguishing media | : Not applicable. |

5.2. Special hazards arising from the substance or mixture

| | |
|-------------|-------------------|
| Fire hazard | : No fire hazard. |
|-------------|-------------------|

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5.3. Advice for firefighters

Firefighting instructions : Not applicable.
Protection during firefighting : Not applicable.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

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

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 : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

8. Exposure controls/personal protection. 13. Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Wear recommended personal protective equipment. Read and follow manufacturer's recommendations. Handle in accordance with good industrial hygiene and safety procedures. Read and follow the Safety Data Sheet (SDS) before use. Avoid breathing vapours.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container tightly closed. Store at temperatures not exceeding 60°C (140°F) (intermittent). Protect from sunlight. Protect from freezing. Keep/Store away from incompatible materials.

7.3. Specific end use(s)

Firefighting foam concentrate.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| 2-(2-butoxyethoxy)ethanol (112-34-5) | | |
|--------------------------------------|--|---------------------------------------|
| EU | IOELV TWA (mg/m ³) | 67.5 mg/m ³ |
| EU | IOELV TWA (ppm) | 10 ppm |
| EU | IOELV STEL (mg/m ³) | 101.2 mg/m ³ |
| EU | IOELV STEL (ppm) | 15 ppm |
| Belgium | Limit value (mg/m ³) | 67.5 mg/m ³ |
| Belgium | Limit value (ppm) | 10 ppm |
| Belgium | Short time value (mg/m ³) | 101.2 mg/m ³ |
| Belgium | Short time value (ppm) | 15 ppm |
| France | VME (mg/m ³) | 67.5 mg/m ³ |
| France | VME (ppm) | 10 ppm |
| France | VLE (mg/m ³) | 101.2 mg/m ³ |
| France | VLE (ppm) | 15 ppm |
| Netherlands | Grenswaarde TGG 8H (mg/m ³) | 50 mg/m ³ |
| Netherlands | Grenswaarde TGG 8H (ppm) | 7.4 ppm |
| Netherlands | Grenswaarde TGG 15MIN (mg/m ³) | 100 mg/m ³ |
| Netherlands | Grenswaarde TGG 15MIN (ppm) | 15 ppm |
| United Kingdom | WEL TWA (mg/m ³) | 67.5 mg/m ³ |
| United Kingdom | WEL TWA (ppm) | 10 ppm |
| United Kingdom | WEL STEL (mg/m ³) | 101.2 mg/m ³ |
| United Kingdom | WEL STEL (ppm) | 15 ppm |
| USA - ACGIH | ACGIH TWA (ppm) | 10 ppm (Inhalable fraction and vapor) |

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| 2-methyl-2,4-pentanediol (107-41-5) | | |
|--|--|--|
| Belgium | Limit value (mg/m ³) | 123 mg/m ³ |
| Belgium | Limit value (ppm) | 25 ppm |
| France | VLE (mg/m ³) | 125 mg/m ³ |
| France | VLE (ppm) | 25 ppm |
| United Kingdom | WEL TWA (mg/m ³) | 123 mg/m ³ |
| United Kingdom | WEL TWA (ppm) | 25 ppm |
| United Kingdom | WEL STEL (mg/m ³) | 123 mg/m ³ |
| United Kingdom | WEL STEL (ppm) | 25 ppm |
| USA - ACGIH | ACGIH TWA (ppm) | 25 ppm (Vapor fraction) |
| USA - ACGIH | ACGIH STEL (mg/m ³) | 10 mg/m ³ (Inhalable fraction, Aerosol only) |
| USA - ACGIH | ACGIH STEL (ppm) | 50 ppm (Vapor fraction) |
| Ethane-1,2-diol (107-21-1) | | |
| EU | IOELV TWA (mg/m ³) | 52 mg/m ³ |
| EU | IOELV TWA (ppm) | 20 ppm |
| EU | IOELV STEL (mg/m ³) | 104 mg/m ³ |
| EU | IOELV STEL (ppm) | 40 ppm |
| Belgium | Limit value (mg/m ³) | 52 mg/m ³ |
| Belgium | Limit value (ppm) | 20 ppm |
| Belgium | Short time value (mg/m ³) | 104 mg/m ³ |
| Belgium | Short time value (ppm) | 40 ppm |
| France | VME (mg/m ³) | 52 mg/m ³ |
| France | VME (ppm) | 20 ppm |
| France | VLE (mg/m ³) | 104 mg/m ³ |
| France | VLE (ppm) | 40 ppm |
| Netherlands | Grenswaarde TGG 8H (mg/m ³) | 52 mg/m ³ (damp) 10 mg/m ³ (druppels) |
| Netherlands | Grenswaarde TGG 8H (ppm) | 20 ppm (damp) 3.9 ppm (druppels) |
| Netherlands | Grenswaarde TGG 15MIN (mg/m ³) | 104 mg/m ³ (damp) |
| Netherlands | Grenswaarde TGG 15MIN (ppm) | 40 ppm (damp) |
| United Kingdom | WEL TWA (mg/m ³) | 10 mg/m ³ 52 mg/m ³ |
| United Kingdom | WEL TWA (ppm) | 20 ppm |
| United Kingdom | WEL STEL (mg/m ³) | 104 mg/m ³ |
| United Kingdom | WEL STEL (ppm) | 40 ppm |
| USA - ACGIH | ACGIH TWA (ppm) | 25 ppm (Vapor fraction) |
| USA - ACGIH | ACGIH STEL (mg/m ³) | 10 mg/m ³ (Inhalable fraction, Aerosol only) |
| USA - ACGIH | ACGIH STEL (ppm) | 50 ppm (Vapor fraction) |
| 2-methyl-2-propanol (75-65-0) | | |
| Belgium | Limit value (mg/m ³) | 307 mg/m ³ |
| Belgium | Limit value (ppm) | 100 ppm |
| France | VME (mg/m ³) | 300 mg/m ³ |
| France | VME (ppm) | 100 ppm |
| United Kingdom | WEL TWA (mg/m ³) | 308 mg/m ³ |
| United Kingdom | WEL TWA (ppm) | 100 ppm |
| United Kingdom | WEL STEL (mg/m ³) | 462 mg/m ³ |
| United Kingdom | WEL STEL (ppm) | 150 ppm |
| USA - ACGIH | ACGIH TWA (ppm) | 100 ppm |
| Ethanol (64-17-5) | | |
| Belgium | Limit value (mg/m ³) | 1907 mg/m ³ |
| Belgium | Limit value (ppm) | 1000 ppm |
| France | VME (mg/m ³) | 1900 mg/m ³ |
| France | VME (ppm) | 1000 ppm |
| France | VLE (mg/m ³) | 9500 mg/m ³ |
| France | VLE (ppm) | 5000 ppm |
| Netherlands | Grenswaarde TGG 8H (mg/m ³) | 260 mg/m ³ |
| Netherlands | Grenswaarde TGG 8H (ppm) | 136 ppm |
| Netherlands | Grenswaarde TGG 15MIN (mg/m ³) | 1900 mg/m ³ |
| Netherlands | Grenswaarde TGG 15MIN (ppm) | 992 ppm |

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| Ethanol (64-17-5) | | |
|-------------------|------------------------------|------------------------|
| United Kingdom | WEL TWA (mg/m ³) | 1920 mg/m ³ |
| United Kingdom | WEL TWA (ppm) | 1000 ppm |
| USA - ACGIH | ACGIH STEL (ppm) | 1000 ppm |

8.2. Exposure controls

Appropriate engineering controls:

Ensure adequate ventilation. Follow the exposure limits given on this material safety data sheet.

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:

Wear protective gloves (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): nitrile rubber (NBR) - 0.2 mm coating thickness

Eye protection:

Sealed safety goggles

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment (recommended filter type A2/P2)

Thermal hazard protection:

Wear thermal protective clothing, when necessary.

Environmental exposure controls:

Contain spills. Prevent releases. Observe national regulations on emissions. Ensure all national/local regulations are observed.

Other information:

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|--------------------------|
| Physical state | : Liquid |
| Colour | : Amber. |
| Odour | : Characteristic. |
| Odour threshold | : No data available |
| pH | : 6.6 - 7.6 |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : -19 °C |
| Boiling point | : No data available |
| Flash point | : > 100 °C |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Density | : 1.02 - 1.06 |
| Solubility | : No data available |
| Log Pow | : No data available |
| Viscosity, kinematic | : 3.7 mm ² /s |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |

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Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable and 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

Incompatible materials. Extremely high or low temperatures.

10.5. Incompatible materials

Alkali metals. Oxidizing agent. Water reactive substances.

10.6. Hazardous decomposition products

Carbon oxides. Sulphur oxides. Hydrogen fluoride. Nitrogen oxides (NO_x). Sodium oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

| | |
|----------------|---------------------------|
| ATE CLP (oral) | 1881.822 mg/kg bodyweight |
|----------------|---------------------------|

| 2-(2-butoxyethoxy)ethanol (112-34-5) | |
|--------------------------------------|---|
| LD50 oral | 2410 - 5530 mg/kg bodyweight (Equivalent or similar to OECD 401, Mouse, Male, Experimental value, Oral) |
| LD50 dermal rabbit | 2764 mg/kg bodyweight (Equivalent or similar to OECD 402, Rabbit, Male, Experimental value, Dermal) |

| 2-methyl-2,4-pentanediol (107-41-5) | |
|-------------------------------------|--|
| LD50 oral rat | > 2000 mg/kg bodyweight (OECD 420: Acute Oral toxicity – Acute Toxic Class Method, Rat, Male / female, Experimental value, Oral) |
| LD50 dermal rat | > 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal) |
| LC50 inhalation rat (mg/l) | > 55 g/m ³ (Equivalent or similar to OECD 403, 8 h, Rat, Male, Experimental value, Inhalation (vapours)) |

| Ethane-1,2-diol (107-21-1) | |
|----------------------------|--|
| LD50 oral rat | 7712 mg/kg bodyweight (according to BASF-internal standards, Rat, Male / female, Experimental value, Aqueous solution, Oral, 7 day(s)) |
| LD50 dermal | > 3500 mg/kg bodyweight (Mouse, Male / female, Experimental value, Dermal) |
| LC50 inhalation rat (mg/l) | > 2.5 mg/l (6 h, Rat, Male / female, Experimental value, Inhalation (aerosol)) |

| 2-methyl-2-propanol (75-65-0) | |
|-------------------------------|---|
| LD50 oral rat | 3046 mg/kg bodyweight (EPA OPPTS 870.1100: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s)) |
| LD50 dermal rabbit | > 2000 mg/kg bodyweight (EU Method B.3: Acute toxicity (dermal), 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s)) |
| LC50 inhalation rat (mg/l) | > 36 mg/l (EPA OPPTS 870.1300: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s)) |

| Ethanol (64-17-5) | |
|----------------------------|---|
| LD50 oral rat | 10740 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral) |
| LD50 dermal rabbit | > 16000 mg/kg (Rabbit, Literature study, Dermal) |
| LC50 inhalation rat (mg/l) | 117 - 125 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation) |

Skin corrosion/irritation : Not classified
pH: 6.6 - 7.6

Serious eye damage/irritation : Causes serious eye irritation.
pH: 6.6 - 7.6

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

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| | |
|------------------------|---|
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed). |
| Aspiration hazard | : Not classified |

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|-------------------------------------|------------------------|
| Viscosity, kinematic | 3.7 mm ² /s |

Potential adverse human health effects and symptoms : Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

| 2-(2-butoxyethoxy)ethanol (112-34-5) | |
|---|---|
| LC50 fish 1 | 1300 mg/l (Equivalent or similar to OECD 203, 96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value, Nominal concentration) |
| EC50 Daphnia 1 | > 100 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect) |
| ErC50 (algae) | 1101 mg/l (Equivalent or similar to OECD 201, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration) |

| 2-methyl-2,4-pentanediol (107-41-5) | |
|--|--|
| LC50 fish 1 | 9450 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value) |
| EC50 Daphnia 1 | 5410 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value) |
| ErC50 (algae) | > 429 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value) |

| Ethane-1,2-diol (107-21-1) | |
|-----------------------------------|---|
| LC50 fish 1 | 40761 mg/l (96 h, Salmo gairdneri, Static system) |
| EC50 Daphnia 1 | > 10000 mg/l (24 h, Daphnia magna) |
| EC50 96h algae (1) | 6.5 - 13 g/l (Selenastrum capricornutum, Growth) |

| 2-methyl-2-propanol (75-65-0) | |
|--------------------------------------|---|
| LC50 fish 1 | > 961 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, GLP) |
| EC50 Daphnia 1 | 933 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP) |
| EC50 72h algae (1) | > 976 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP) |

| Ethanol (64-17-5) | |
|--------------------------|---|
| LC50 fish 1 | 14200 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value) |
| EC50 72h algae (1) | 275 mg/l (Equivalent or similar to OECD 201, Chlorella vulgaris, Static system, Fresh water, Experimental value, Growth rate) |

12.2. Persistence and degradability

| 2-(2-butoxyethoxy)ethanol (112-34-5) | |
|---|---------------------------------|
| Persistence and degradability | Readily biodegradable in water. |

| 2-methyl-2,4-pentanediol (107-41-5) | |
|--|------------------------------------|
| Persistence and degradability | Readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 0.02 g O ₂ /g substance |
| Chemical oxygen demand (COD) | 2.2 g O ₂ /g substance |
| ThOD | 2.3 g O ₂ /g substance |
| BOD (% of ThOD) | 0.01 |

| Ethane-1,2-diol (107-21-1) | |
|-----------------------------------|--|
| Persistence and degradability | Biodegradable in the soil. Readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 0.47 g O ₂ /g substance |
| Chemical oxygen demand (COD) | 1.24 g O ₂ /g substance |
| ThOD | 1.29 g O ₂ /g substance |
| BOD (% of ThOD) | 0.36 |

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| 2-methyl-2-propanol (75-65-0) | |
|--------------------------------------|-------------------------------------|
| Persistence and degradability | Not readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 0 g O ₂ /g substance |
| Chemical oxygen demand (COD) | 2.18 g O ₂ /g substance |
| ThOD | 2.59 g O ₂ /g substance |
| BOD (% of ThOD) | 0 |

| Ethanol (64-17-5) | |
|---------------------------------|--|
| Persistence and degradability | Biodegradable in the soil. Readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 0.8 - 0.967 g O ₂ /g substance |
| Chemical oxygen demand (COD) | 1.7 g O ₂ /g substance |
| ThOD | 2.1 g O ₂ /g substance |
| BOD (% of ThOD) | 0.43 |

12.3. Bioaccumulative potential

| Filmfoam^{C6} 913 FP | |
|-------------------------------------|---|
| Bioaccumulative potential | The product is not expected to bioaccumulate. |

| 2-(2-butoxyethoxy)ethanol (112-34-5) | |
|---|---|
| Log Pow | 1 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 20 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

| 2-methyl-2,4-pentanediol (107-41-5) | |
|--|--|
| Log Pow | 0.58 (QSAR) |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

| Ethane-1,2-diol (107-21-1) | |
|-----------------------------------|---------------------------------------|
| BCF fish 1 | 10 (72 h, Leuciscus idus) |
| BCF other aquatic organisms 1 | 0.21 - 0.6 (Procambarus sp., Chronic) |
| BCF other aquatic organisms 2 | 190 (24 h, Algae) |
| Log Pow | -1.34 (Experimental value) |
| Bioaccumulative potential | Not bioaccumulative. |

| 2-methyl-2-propanol (75-65-0) | |
|--------------------------------------|--|
| Log Pow | 0.317 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 22.5 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

| Ethanol (64-17-5) | |
|---------------------------|---|
| BCF fish 1 | 1 (Other, 72 h, Cyprinus carpio, Static system, Fresh water, Read-across) |
| Log Pow | -0.31 (Experimental value) |
| Bioaccumulative potential | Not bioaccumulative. |

12.4. Mobility in soil

| 2-(2-butoxyethoxy)ethanol (112-34-5) | |
|---|---------------------------------------|
| Surface tension | 27 mN/m (25 °C, 0.00212 mol/g) |
| Ecology - soil | Low potential for adsorption in soil. |

| 2-methyl-2,4-pentanediol (107-41-5) | |
|--|------------------------|
| Surface tension | 0.033 N/m |
| Ecology - soil | Highly mobile in soil. |

| Ethane-1,2-diol (107-21-1) | |
|-----------------------------------|---|
| Surface tension | 48 mN/m (20 °C) |
| Ecology - soil | No (test)data on mobility of the substance available. |

| 2-methyl-2-propanol (75-65-0) | |
|--------------------------------------|---|
| Surface tension | 69.8 mN/m (21 °C, 1.09 g/l, OECD 115: Surface Tension of Aqueous Solutions) |
| Log Koc | 0.324 - 0.707 (log Koc, SRC PCKOCWIN v2.0, Calculated value) |
| Ecology - soil | Highly mobile in soil. |

| Ethanol (64-17-5) | |
|--------------------------|------------------------|
| Surface tension | 0.022 N/m (20 °C) |
| Ecology - soil | Highly mobile in soil. |

12.5. Results of PBT and vPvB assessment

| Filmfoam^{C6} 913 FP | |
|--|--|
| PBT: not relevant – no registration required | |

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vPvB: not relevant – no registration required

Component

| | |
|--------------------------------------|---|
| 2-(2-butoxyethoxy)ethanol (112-34-5) | 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 |
| 2-methyl-2,4-pentenediol (107-41-5) | 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 |
| Ethane-1,2-diol (107-21-1) | 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 |

12.6. Other adverse effects

Other adverse effects : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.
European List of Waste (LoW) code : 16 03 05* - organic wastes containing dangerous substances

SECTION 14: Transport information

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

| ADR | IMDG | IATA | ADN | RID |
|---|----------------|----------------|----------------|----------------|
| 14.1. UN 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 |
| 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 |
| 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

- Rail transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

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| | |
|--|--|
| 40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not. | 2-methyl-2-propanol - Ethanol |
| 55. 2-(2-butoxyethoxy)ethanol (DEGBE) | 2-(2-butoxyethoxy)ethanol |
| 3(a) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F | 2-methyl-2-propanol - Ethanol |
| 3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10 | Filmfoam ^{C6} 913 FP - 2-(2-butoxyethoxy)ethanol - 2-methyl-2,4-pentanediol - Ethane-1,2-diol - 2-methyl-2-propanol - Ethanol |

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

France

Occupational diseases : RG 84 - Affections engendrées par les solvants organiques liquides à usage professionnel

Germany

Reference to AwSV : Water hazard class (WGK) 2, Significantly hazardous to water (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : 2-(2-butoxyethoxy)ethanol,2-methyl-2,4-pentanediol,Ethane-1,2-diol ,Ethanol are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : Ethanol is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : Ethanol is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : Ethanol is listed

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Data sources : 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

| Full text of H- and EUH-statements: | |
|-------------------------------------|--|
| Acute Tox. 4 (Inhalation:dust,mist) | Acute toxicity (inhalation:dust,mist) Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| 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 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT RE 2 | Specific target organ toxicity — Repeated exposure, Category 2 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H225 | Highly flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |

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| | |
|------|--|
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |

SDS EU (REACH Annex II) - Kerr Fire

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.