

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

Product form : Mixture
Product name : Tridol^{C6} ATF 3/3 LT
Product code : FNC 03 99
Type of product : Firefighting foam concentrate (AR-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

ANGUS FIRE Ltd
Station Road
Bentham LA2 7NA - United Kingdom
T +44 1524 264000 - F +441524 264180
general.enquiries@angusuk.co.uk - www.angusfire.co.uk

1.4. Emergency telephone number

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

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

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

Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2 H319
Specific target organ toxicity — Repeated exposure, Category 2 H373

Full text of hazard classes and 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) :



GHS07

GHS08

Signal word (CLP) : Warning
Hazardous ingredients : Ethane-1,2-diol
Hazard statements (CLP) : H315 - Causes skin irritation.
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.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.

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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 | 10 - 25 | Acute Tox. 4 (Oral), H302 STOT RE 2, H373 |
| 2-methyl-2,4-pentanediol | (CAS-No.) 107-41-5 (EC-No.) 203-489-0 (EC Index-No.) 603-053-00-3 (REACH-no) 01-2119539582-35 | 10 - 25 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 |
| Sodium octyl sulfate | (CAS-No.) 142-31-4 (EC-No.) 205-535-5 (REACH-no) 01-2119966154-35 | 1 - 4 | Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 |
| Sodium decyl sulfate | (CAS-No.) 142-87-0 (EC-No.) 205-568-5 (REACH-no) 01-2119970328-30 | 1 - 4 | Acute Tox. 4 (Oral), H302 Aquatic Chronic 3, H412 |
| 2-(2-Butoxyethoxy)ethanol substance with a Community workplace exposure limit | (CAS-No.) 112-34-5 (EC-No.) 203-961-6 (EC Index-No.) 603-096-00-8 (REACH-no) 01-2119475104-44 | < 0.1 | Eye Irrit. 2, H319 |

Specific concentration limits:

| Name | Product identifier | Specific concentration limits |
|----------------------|---|---|
| Sodium octyl sulfate | (CAS-No.) 142-31-4 (EC-No.) 205-535-5 (REACH-no) 01-2119966154-35 | (10 =<C < 20) Eye Irrit. 2, H319 (20 =<C < 100) Eye Dam. 1, H318 |
| Sodium decyl sulfate | (CAS-No.) 142-87-0 (EC-No.) 205-568-5 (REACH-no) 01-2119970328-30 | (10 =<C < 20) Eye Irrit. 2, H319 (20 =<C < 100) Eye Dam. 1, H318 |

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 | : Assure fresh air breathing. Allow the victim to rest. |
| First-aid measures after skin contact | : Wash with plenty of water/.... Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. |
| 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. Do NOT induce vomiting. Obtain emergency medical attention. |

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

| | |
|-------------------------------------|---|
| Symptoms/effects | : Causes damage to organs (kidneys) (if swallowed). |
| Symptoms/effects after skin contact | : Causes skin irritation. |
| Symptoms/effects after eye contact | : Causes serious eye irritation. |

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 liquid 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.
Hygiene measures : 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 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

| 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) |

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| Ethane-1,2-diol (107-21-1) | | |
|---|--|--|
| 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-2,4-pentanediol (107-41-5) | | |
| EU | IOELV TWA (mg/m ³) | 123 mg/m ³ |
| EU | IOELV TWA (ppm) | 25 ppm |
| EU | IOELV STEL (mg/m ³) | 123 mg/m ³ |
| EU | IOELV STEL (ppm) | 25 ppm |
| 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) |
| 2-(2-Butoxyethoxy)ethanol (112-34-5) | | |
| EU | Local name | 2-(2-Butoxyethoxy)ethanol |
| 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 2-(2-Butoxyéthoxy)éthanol; Belgium; Time-weighted average exposure limit 8 h) |
| Belgium | Limit value (ppm) | 10 ppm 2-(2-Butoxyéthoxy)éthanol; Belgium; Time-weighted average exposure limit 8 h) |
| Belgium | Short time value (mg/m ³) | 101.2 mg/m ³ 2-(2-Butoxyéthoxy)éthanol; Belgium; Short time value) |
| Belgium | Short time value (ppm) | 15 ppm 2-(2-Butoxyéthoxy)éthanol; Belgium; Short time value) |
| Netherlands | Grenswaarde TGG 8H (mg/m ³) | 50 mg/m ³ 2-(2-butoxyethoxy)ethanol; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value) |
| Netherlands | Grenswaarde TGG 8H (ppm) | 7.4 ppm 2-(2-butoxyethoxy)ethanol; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value) |
| Netherlands | Grenswaarde TGG 15MIN (mg/m ³) | 100 mg/m ³ 2-(2-butoxyethoxy)ethanol; Netherlands; Short time value; Public occupational exposure limit value) |
| Netherlands | Grenswaarde TGG 15MIN (ppm) | 15 ppm 2-(2-butoxyethoxy)ethanol; Netherlands; Short time value; Public occupational exposure limit value) |
| United Kingdom | WEL TWA (mg/m ³) | 67.5 mg/m ³ 2-(2-Butoxyethoxy)ethanol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005) |
| United Kingdom | WEL TWA (ppm) | 10 ppm 2-(2-Butoxyethoxy)ethanol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005) |
| United Kingdom | WEL STEL (mg/m ³) | 101.2 mg/m ³ 2-(2-Butoxyethoxy)ethanol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005) |
| United Kingdom | WEL STEL (ppm) | 15 ppm 2-(2-Butoxyethoxy)ethanol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005) |
| USA - ACGIH | ACGIH TWA (ppm) | 10 ppm (Diethylene glycol monobutyl ether; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction and vapor) |

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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 (butyl rubber)

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing. Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment (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 | : Light amber. |
| Odour | : Characteristic. |
| Odour threshold | : No data available |
| pH | : 7 - 8 |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : -16 °C |
| Boiling point | : No data available |
| Flash point | : > 100 °C |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Non flammable. |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Density | : 1.01 - 1.05 |
| Solubility | : No data available |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : 2300 - 3000 cP |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| 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.

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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 (NOx). Sodium oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

| Ethane-1,2-diol (107-21-1) | |
|---|---|
| LD50 oral rat | > 5000 mg/kg (Rat; Study on Literature) |
| LD50 dermal | > 3500 mg/kg bodyweight (Mouse, Male/female, Experimental value) |
| LC50 inhalation rat (mg/l) | > 2.5 mg/l (6 h, Rat, Male/female, Experimental value) |
| 2-methyl-2,4-pentanediol (107-41-5) | |
| LD50 oral rat | 3700 mg/kg (Rat; OECD 420; Experimental value; > 2000 mg/kg bodyweight; Rat) |
| LD50 dermal rat | > 2000 mg/kg bodyweight (Rat; Experimental value; OECD 402: acute dermal toxicity) |
| LD50 dermal rabbit | > 8000 mg/kg (Rabbit) |
| LC50 inhalation rat (mg/l) | > 55 g/m ³ (Equivalent or similar to OECD 403, 8 h, Rat, Male, Experimental value) |
| 2-(2-Butoxyethoxy)ethanol (112-34-5) | |
| LD50 oral rat | 5660 mg/kg (Rat) |
| LD50 dermal rabbit | 2764 mg/kg (Rabbit; Experimental value; OECD 402 : acute dermal toxicity) |
| Sodium decyl sulfate (142-87-0) | |
| LD50 oral rat | 1950 mg/kg (Rat; Study Literature) |
| LD50 dermal rat | > 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male/female, Read-across) |
| Sodium octyl sulfate (142-31-4) | |
| LD50 oral rat | 3200 mg/kg (Rat; OECD 423 : Acute oral toxicity - Class Method for acute toxicity; Literature study; >2000 mg/kg bodyweight; Rat; Experimental value) |
| LD50 dermal rat | > 2000 mg/kg bodyweight (Rat; Experimental value; OECD 402 acute dermal toxicity) |

| | |
|---|---|
| Skin corrosion/irritation | : Causes skin irritation. pH: 7 - 8 |
| Serious eye damage/irritation | : Causes serious eye irritation. pH: 7 - 8 |
| Respiratory or skin sensitisation | : Not classified |
| Additional information | : Based on available data, the classification criteria are not met |
| Germ cell mutagenicity | : Not classified Based on available data, the classification criteria are not met |
| Carcinogenicity | : Not classified |
| Additional information | : Based on available data, the classification criteria are not met |
| Reproductive toxicity | : Not classified |
| Additional information | : Based on available data, the classification criteria are not met |
| STOT-single exposure | : Not classified |
| Additional information | : Based on available data, the classification criteria are not met |
| STOT-repeated exposure | : May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed). |
| Aspiration hazard | : Not classified |
| Additional information | : Based on available data, the classification criteria are not met |
| Potential adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |

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SECTION 12: Ecological information

12.1. Toxicity

| Ethane-1,2-diol (107-21-1) | |
|---|--|
| LC50 fish 1 | 53000 mg/l (96 h; Pimephales promelas; Static system) |
| LC50 fish 2 | 40761 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Static system) |
| EC50 Daphnia 1 | > 10000 mg/l (24 h; Daphnia magna) |
| EC50 96h algae (1) | 6.5 - 13 g/l (Selenastrum capricornutum) |
| Threshold limit algae 1 | > 10000 mg/l (168 h; Scenedesmus quadricauda) |
| Threshold limit algae 2 | 2000 mg/l (192 h; Microcystis aeruginosa) |
| 2-methyl-2,4-pentandiol (107-41-5) | |
| LC50 fish 1 | 12800 mg/l (96 h; Lepomis macrochirus) |
| LC50 fish 2 | 9450 mg/l (96 h; Oncorhynchus mykiss) |
| LC50 other aquatic organisms 1 | 10 - 100 mg/l (96 h) |
| EC50 Daphnia 1 | 5410 mg/l (48 h; Daphnia magna) |
| EC50 Daphnia 2 | 3300 mg/l (48 h; Daphnia pulex) |
| ErC50 (algae) | > 429 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value) |
| Threshold limit other aquatic organisms 1 | 10 - 100,96 h |
| Threshold limit algae 1 | > 429 mg/l (72 h; Pseudokirchneriella subcapitata) |
| 2-(2-Butoxyethoxy)ethanol (112-34-5) | |
| LC50 fish 1 | 1300 mg/l (96 h; Lepomis macrochirus) |
| LC50 fish 2 | 1805 mg/l (48 h; Leuciscus idus) |
| LC50 other aquatic organisms 1 | 10 - 100 mg/l (96 h) |
| EC50 Daphnia 1 | 2850 mg/l (24 h; Daphnia magna; GLP) |
| EC50 Daphnia 2 | > 100 mg/l (48 h; Daphnia magna) |
| TLM fish 1 | 10 - 100,96 h; Pisces |
| TLM other aquatic organisms 1 | 10 - 100,96 h |
| Threshold limit other aquatic organisms 1 | 10 - 100,96 h |
| Threshold limit algae 1 | 53 mg/l (192 h; Microcystis aeruginosa) |
| Threshold limit algae 2 | >= 100 mg/l (96 h; Scenedesmus subspicatus) |
| Sodium decyl sulfate (142-87-0) | |
| LC50 fish 1 | 13 mg/l (JIS K0102-1986-71, 48 h, Cyprinus carpio, Static system, Fresh water, Experimental value) |
| EC50 Daphnia 1 | 470 mg/l (Other, 24 h, Daphnia magna, Fresh water, Experimental value) |
| EC50 72h algae (1) | 8.64 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value) |
| Sodium octyl sulfate (142-31-4) | |
| LC50 fish 1 | > 100 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Danio rerio; Semi-static system; Fresh water; Experimental value) |
| EC50 Daphnia 1 | > 100 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Semi-static system; Fresh water; Experimental value) |
| EC50 72h algae (1) | > 511 mg/l (EU Method C.3, Desmodesmus subspicatus, Static system, Fresh water, Read-across) |
| EC50 72h algae (2) | 511 mg/l (EU Method C.3, Desmodesmus subspicatus, Static system, Fresh water, Read-across) |
| Threshold limit algae 1 | > 511 mg/l (EC50; EU Method C.3; 72 h; Desmodesmus subspicatus; Static system; Fresh water; Read-across) |
| Threshold limit algae 2 | 199 mg/l (EC10; EU Method C.3; 72 h; Desmodesmus subspicatus; Static system; Fresh water; Read-across) |

12.2. Persistence and degradability

| Ethane-1,2-diol (107-21-1) | |
|-----------------------------------|------------------------------------|
| Persistence and degradability | 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-2,4-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 |

| 2-(2-Butoxyethoxy)ethanol (112-34-5) | |
|---|-------------------------------------|
| Persistence and degradability | Readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 0.25 g O ₂ /g substance |
| Chemical oxygen demand (COD) | 2.08 g O ₂ /g substance |
| ThOD | 2.173 g O ₂ /g substance |
| BOD (% of ThOD) | 0.11 |

| Sodium octyl sulfate (142-31-4) | |
|--|---------------------------------|
| Persistence and degradability | Readily biodegradable in water. |

12.3. Bioaccumulative potential

| Tridol^{C6} ATF 3/3 LT | |
|---------------------------------------|---|
| Bioaccumulative potential | The product is not expected to bioaccumulate. |

| 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 | Low bioaccumulation potential. |

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

| 2-(2-Butoxyethoxy)ethanol (112-34-5) | |
|---|--------------------------------|
| BCF fish 1 | 0.46 (QSAR) |
| Log Pow | 0.56 (Experimental value) |
| Bioaccumulative potential | Low bioaccumulation potential. |

| Sodium decyl sulfate (142-87-0) | |
|--|--------------------------------|
| Log Pow | 0.71 (Estimated value) |
| Bioaccumulative potential | Low bioaccumulation potential. |

| Sodium octyl sulfate (142-31-4) | |
|--|--------------------------------|
| Log Pow | -0.27 (Estimated value) |
| Bioaccumulative potential | Low bioaccumulation potential. |

12.4. Mobility in soil

| Ethane-1,2-diol (107-21-1) | |
|-----------------------------------|--|
| Surface tension | 0.048 N/m (20 °C) |
| Ecology - soil | No (test) data on mobility of the substance available. |

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

| 2-(2-Butoxyethoxy)ethanol (112-34-5) | |
|---|-------------------|
| Surface tension | 0.034 N/m (25 °C) |

| Sodium decyl sulfate (142-87-0) | |
|--|--|
| Surface tension | 0.033 N/m (24 °C, 1 g/l) |
| Log Koc | 2.09 - 2.25 (log Koc, Other, Experimental value) |
| Ecology - soil | Low potential for adsorption in soil. |

| Sodium octyl sulfate (142-31-4) | |
|--|--|
| Surface tension | 0.0584 N/m (21.5 °C; 1 g/l) |
| Log Koc | log Koc, Other; 1.88 - 2; Experimental value |
| Ecology - soil | Highly mobile in soil. |

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12.5. Results of PBT and vPvB assessment

| Tridol ^{C6} ATF 3/3 LT | |
|---|---|
| PBT: not relevant – no registration required | |
| vPvB: not relevant – no registration required | |
| Component | |
| 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 |
| 2-methyl-2,4-pentanediol (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 |
| Sodium decyl sulfate (142-87-0) | 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 |
| Sodium octyl sulfate (142-31-4) | 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 |

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

14.1. UN number

UN-No. (ADR) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable
UN-No. (ADN) : Not applicable
UN-No. (RID) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)

ADR
Transport hazard class(es) (ADR) : Not applicable

IMDG
Transport hazard class(es) (IMDG) : Not applicable

IATA
Transport hazard class(es) (IATA) : Not applicable

ADN
Transport hazard class(es) (ADN) : Not applicable

RID
Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable

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Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

No data available

- Transport by sea

No data available

- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

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:

| | |
|--|--|
| 3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008 | Tridol ^{C6} ATF 3/3 LT - 2-(2-Butoxyethoxy)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 | Tridol ^{C6} ATF 3/3 LT - Ethane-1,2-diol - 2-methyl-2,4-pentanediol - 2-(2-Butoxyethoxy)ethanol |
| 55. 2-(2-butoxyethoxy)ethanol (DEGBE) | 2-(2-Butoxyethoxy)ethanol |

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

VwVwS Annex reference : Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 4)

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 : None of the components are listed

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

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are 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

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15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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.

Other information : None.

| Full text of H- and EUH-statements: | |
|-------------------------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment — Chronic Hazard, Category 3 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, 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 |
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H412 | Harmful to aquatic life with long lasting effects. |

SDS EU (REACH Annex II) - Angus 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