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

1.1. Product identifier

Product form : Mixture
Product name : FP350^{C6}
UFI : V3K0-P08X-2006-YXGC
Product code : FNC 02 11
Type of product : Firefighting foam concentrate (FP)

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
LA2 7NA Bentham - United Kingdom
T +44(0) 1524 264000 - F +44(0)1524 264180
general.enquiries@angus.co.uk - www.angusfire.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	Only for healthcare professionals

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
Reproductive toxicity, Category 2	H361
Hazardous to the aquatic environment – Chronic Hazard, Category 3	H412

Full text of H- and EUH-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 : 2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol, 2-methyl-2,4-pentanediol
Hazard statements (CLP) : H317 - May cause an allergic skin reaction.
H361 - Suspected of damaging the unborn child.
H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP) : P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear eye protection, protective clothing, protective gloves
P302+P352 - IF ON SKIN: Wash with plenty of water
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.
P501 - Dispose in a safe manner in accordance with local/national regulations

2.3. Other hazards

Other hazards which do not result in classification : This product contains fluoroalkyl surfactants (which are and include per- or poly- fluoroalkyl substances, "PFAS") and is required to be disposed of by high temperature incineration. See Section 13 for additional information.

PBT: not relevant – no registration required

vPvB: not relevant – no registration required

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

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]
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	4 – 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361d
Iron(II) sulphate, heptahydrate substance with national workplace exposure limit(s) (BE, GB)	(CAS-No.) 7782-63-0 (EC-No.) 231-753-5 (EC Index-No.) 026-003-01-4 (REACH-no) 01-2119513203-57	1 – 4	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319
Zinc chloride substance with national workplace exposure limit(s) (BE, FR, GB)	(CAS-No.) 7646-85-7 (EC-No.) 231-592-0 (EC Index-No.) 030-003-00-2 (REACH-no) 01-2119472431-44	0.1 – 1	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2,2',2"-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	(CAS-No.) 4719-04-4 (EC-No.) 225-208-0 (EC Index-No.) 613-114-00-6 (REACH-no) 01-2119529226-41	0.1 – 1	Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation:dust,mist), H330 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT RE 1, H372
Diethanolamine substance with national workplace exposure limit(s) (BE, FR)	(CAS-No.) 111-42-2 (EC-No.) 203-868-0 (EC Index-No.) 603-071-00-1	< 0.05	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT RE 2, H373

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Iron(II) sulphate, heptahydrate	(CAS-No.) 7782-63-0 (EC-No.) 231-753-5 (EC Index-No.) 026-003-01-4 (REACH-no) 01-2119513203-57	(25 ≤C < 100) Skin Irrit. 2, H315
Zinc chloride	(CAS-No.) 7646-85-7 (EC-No.) 231-592-0 (EC Index-No.) 030-003-00-2 (REACH-no) 01-2119472431-44	(5 ≤C ≤ 100) STOT SE 3, H335
2,2',2"-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	(CAS-No.) 4719-04-4 (EC-No.) 225-208-0 (EC Index-No.) 613-114-00-6 (REACH-no) 01-2119529226-41	(0.1 ≤C ≤ 100) Skin Sens. 1, H317

Comments : This product contains fluoroalkyl surfactants which are and include PFAS (per- or poly-fluoroalkyl substances), see Sections 13 & 15 for additional information.

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 : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

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. Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

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 : Suspected of damaging the unborn child.

Symptoms/effects after inhalation : 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 : 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.

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. Avoid release to the environment.

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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. 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 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

Iron(II) sulphate, heptahydrate (7782-63-0)		
Belgium	OEL TWA	1 mg/m³

Iron(II) sulphate, heptahydrate (7782-63-0)		
United Kingdom	WEL TWA (OEL TWA) [1]	1 mg/m³
United Kingdom	WEL STEL (OEL STEL)	2 mg/m³
USA - ACGIH	ACGIH OEL TWA	1 mg/m³
2-methyl-2,4-pentanediol (107-41-5)		
Belgium	OEL TWA	123 mg/m³
Belgium	OEL TWA [ppm]	25 ppm
France	VLE (OEL C/STEL)	125 mg/m³
France	VLE (OEL C/STEL) [ppm]	25 ppm
United Kingdom	WEL TWA (OEL TWA) [1]	123 mg/m³
United Kingdom	WEL TWA (OEL TWA) [2]	25 ppm
United Kingdom	WEL STEL (OEL STEL)	123 mg/m³
United Kingdom	WEL STEL (OEL STEL) [ppm]	25 ppm
USA - ACGIH	ACGIH OEL TWA [ppm]	25 ppm (Vapor fraction)
USA - ACGIH	ACGIH OEL STEL	10 mg/m³ (Inhalable fraction, Aerosol only)
USA - ACGIH	ACGIH OEL STEL [ppm]	50 ppm (Vapor fraction)
Diethanolamine (111-42-2)		
Belgium	OEL TWA	1 mg/m³
Belgium	OEL TWA [ppm]	0.2 ppm
France	VME (OEL TWA)	15 mg/m³
France	VME (OEL TWA) [ppm]	3 ppm
USA - ACGIH	ACGIH OEL TWA	1 mg/m³ (Inhalable fraction and vapor)
Zinc chloride (7646-85-7)		
Belgium	OEL TWA	1 mg/m³
Belgium	OEL STEL	2 mg/m³
France	VME (OEL TWA)	1 mg/m³
United Kingdom	WEL TWA (OEL TWA) [1]	1 mg/m³
United Kingdom	WEL STEL (OEL STEL)	2 mg/m³
USA - ACGIH	ACGIH OEL TWA	1 mg/m³
USA - ACGIH	ACGIH OEL STEL	2 mg/m³

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	:	Brown.
Odour	:	Characteristic.
Odour threshold	:	No data available
pH	:	6.9 – 7.9
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	-13 °C
Boiling point	:	No data available
Flash point	:	> 100 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20°C	:	No data available
Relative density	:	No data available
Density	:	1.13 – 1.17
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	< 10 mm²/s
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

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 (NOx). Sodium oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	Not classified

Iron(II) sulphate, heptahydrate (7782-63-0)	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Read-across, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Read-across, Anhydrous form, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 1.1 mg/l (EPA OPP 81-3: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Read-across, Anhydrous form, Inhalation)

2,2',2"-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol (4719-04-4)	
LD50 oral rat	763 mg/kg (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, Rat, Male / female, Experimental value, Dermal)
LC50 Inhalation - Rat	0.371 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol))

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, 15 day(s))
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 15 day(s))
LC50 Inhalation - Rat	> 55 mg/l (Equivalent or similar to OECD 403, 8 h, Rat, Male, Experimental value, Inhalation (vapours), 14 day(s))

Diethanolamine (111-42-2)	
LD50 oral rat	1600 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))

Zinc chloride (7646-85-7)	
LD50 oral rat	1100 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Read-across, Dermal, 15 day(s))
LC50 Inhalation - Rat	1.98 mg/l air (10 minutes, Rat, Female, Experimental value, Inhalation (aerosol), 7 day(s))

Skin corrosion/irritation : Not classified
pH: 6.9 – 7.9

Serious eye damage/irritation : Not classified
pH: 6.9 – 7.9

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Suspected of damaging the unborn child.

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

FP350^{C6}	
Viscosity, kinematic	< 10 mm²/s

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Harmful to aquatic life with long lasting effects.

Iron(II) sulphate, heptahydrate (7782-63-0)	
LC50 - Fish [1]	925 mg/l (96 h, Poecilia reticulata, Static system, Literature study)
EC50 - Crustacea [1]	152 mg/l (48 h, Daphnia magna, Literature study, Anhydrous form)

2,2',2"-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol (4719-04-4)	
LC50 - Fish [1]	16.07 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Brachydanio rerio, Static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	11.9 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
ErC50 algae	6.66 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)

2-methyl-2,4-pentanediol (107-41-5)	
LC50 - Fish [1]	9450 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value, Lethal)

2-methyl-2,4-pentanediol (107-41-5)	
EC50 - Crustacea [1]	5410 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h - Algae [1]	> 429 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)

Diethanolamine (111-42-2)	
LC50 - Fish [1]	460 mg/l (96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	30.1 – 89.9 mg/l (ASTM E729-80, 48 h, Ceriodaphnia dubia, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	9.5 mg/l (EPA 600/9-78-018, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

Zinc chloride (7646-85-7)	
LC50 - Fish [1]	169 µg/l (ASTM E729-88, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	670 µg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Ceriodaphnia dubia, Static system, Fresh water, Experimental value)
NOEC chronic algae	(Pseudokircherniella subcapitata)

12.2. Persistence and degradability

FP350^{C6}	
Persistence and degradability	May cause long-term adverse effects in the environment.

Iron(II) sulphate, heptahydrate (7782-63-0)	
Persistence and degradability	Biodegradability in soil: no data available. Readily biodegradable in water.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol (4719-04-4)	
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

Diethanolamine (111-42-2)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.22 g O_2 /g substance
Chemical oxygen demand (COD)	1.52 g O_2 /g substance
ThOD	2.13 g O_2 /g substance

12.3. Bioaccumulative potential

FP350^{C6}	
Bioaccumulative potential	The product is not expected to bioaccumulate.

Iron(II) sulphate, heptahydrate (7782-63-0)	
BCF - Fish [1]	≤ 20 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, Fresh weight)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol (4719-04-4)	
Partition coefficient n-octanol/water (Log Pow)	-2.3 – -1.3 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 24 °C)
Bioaccumulative potential	Not bioaccumulative.

2-methyl-2,4-pentanediol (107-41-5)	
Partition coefficient n-octanol/water (Log Pow)	0.58 (QSAR, KOWWIN)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Diethanolamine (111-42-2)	
BCF - Fish [1]	3.162 l/kg (BCFBAF v3.01, Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	-2.18 – -1.43 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.

Zinc chloride (7646-85-7)	
BCF - Fish [1]	0.4 – 7.51 (45 day(s), Channa punctatus, Semi-static system, Fresh water, Experimental value)

Zinc chloride (7646-85-7)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

Iron(II) sulphate, heptahydrate (7782-63-0)	
Ecology - soil	Adsorbs into the soil.

2,2',2"-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol (4719-04-4)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1 (log Koc, PCKOCWIN v1.66, Calculated value)
Ecology - soil	Highly mobile in soil.

2-methyl-2,4-pentanediol (107-41-5)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

Diethanolamine (111-42-2)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.98 – 1 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

Zinc chloride (7646-85-7)	
Surface tension	No data available in the literature
Ecology - soil	No (test)data on mobility of the substance available. Soil contaminant.

12.5. Results of PBT and vPvB assessment

FP350^{C6}
PBT: not relevant – no registration required
vPvB: not relevant – no registration required

Component	
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
Iron(II) sulphate, heptahydrate (7782-63-0)	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
Zinc chloride (7646-85-7)	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
2,2',2"-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol (4719-04-4)	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
Diethanolamine (111-42-2)	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

This product contains PFAS. Local requirements for waste disposal may be more restrictive or otherwise different from national regulations. Therefore, applicable local and state regulatory agencies should be contacted regarding disposal of waste foam concentrate or foam/foam solution.

Concentrate

Prevent foam concentrate from entering ground water, surface water or storm drains. Small quantities of foam concentrate may be collected on absorbents which can then be disposed of. Disposal should be made in accordance with local, state and federal regulations. High temperature incineration is required at a minimum of 1000°C with a minimum residence time of 2 seconds.

Foam/Foam Solution

Prevent foam/foam solution from entering ground water, surface water or storm drains. Small quantities of foam solution may be collected on absorbents which can then be disposed of. Disposal should be made in accordance with local, state and federal regulations. High temperature incineration is required at a minimum of 1000°C with a minimum residence time of 2 seconds.

NOTE: Please consult Angus Fire for additional information regarding the disposal of foam concentrates and foam solutions or visit https://angusfire.co.uk/use-discharge-and-disposal-of-firefighting-foam-products/.

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 / IMDG / IATA / ADN / RID

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

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Listed on REACH Annex XVII (Restriction Conditions). The following restrictions are applicable:	
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	FP350^{C6} ; 2,2',2"-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol ; 2-methyl-2,4-pentanediol

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

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

15.1.2. National regulations

France

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

Germany

Regulatory reference : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the 12. BlmSchV (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
SZW-lijst van reprotoxische stoffen – Borstvoeding	:	None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	:	None of the components are listed
SZW-lijst van reprotoxische 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

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. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
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 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
H302	Harmful if swallowed.
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.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child
H372	Causes damage to organs through prolonged or repeated exposure.
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.
H412	Harmful to aquatic life with long lasting effects.
Repr. 2	Reproductive toxicity, Category 2
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
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1
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

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.