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

1.1. Product identifier

Product form : Mixture
Product name : Niagara^{C6} 3/3
UFI : XTY1-90KY-Y003-PQ36
Product code : FNC 07 20
Type of product : Firefighting foam concentrate (AR-FFFP)

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

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-methyl-2,4-pentanediol, 2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol
Hazard statements (CLP) : H317 - May cause an allergic skin reaction.
H361 - Suspected of damaging the unborn child.
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
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	0.1 – 4	Flam. Liq. 2, H225 Eye Irrit. 2, H319
1,2-propanediol substance with national workplace exposure limit(s) (GB)	(CAS-No.) 57-55-6 (EC-No.) 200-338-0 (REACH-no) 01-2119456809-23	0.1 – 1	Not classified
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
Ethane-1,2-diol substance with national workplace exposure limit(s) (BE, FR, GB, NL); substance with a Community workplace exposure limit	(CAS-No.) 107-21-1 (EC-No.) 203-473-3 (EC Index-No.) 603-027-00-1 (REACH-no) 01-2119456816-28	0.1 – 1	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
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 – 1	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation:dust,mist), H332 Eye Irrit. 2, H319 STOT SE 3, H335
Iron(II) chloride substance with national workplace exposure limit(s) (BE, GB)	(CAS-No.) 7758-94-3 (EC-No.) 231-843-4 (REACH-no) 01-2119498060-41	0.05 – 1	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1, H314 Eye Dam. 1, H318
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	< 0.1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT RE 2, H373
2-(2-butoxyethoxy)ethanol substance with national workplace exposure limit(s) (BE, FR, GB, NL); 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	0.05 – 0.1	Eye Irrit. 2, H319
Iron(III) chloride substance with national workplace exposure limit(s) (BE, GB)	(CAS-No.) 7705-08-0 (EC-No.) 231-729-4 (REACH-no) 01-2119497998-05	< 0.05	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318
Nickel dichloride substance with national workplace exposure limit(s) (BE, GB); substance with a Community workplace exposure limit	(CAS-No.) 7718-54-9 (EC-No.) 231-743-0 (EC Index-No.) 028-011-00-6 (REACH-no) 01-2119486973-20	< 0.05	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Inhalation:dust,mist), H331 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1A, H350i Repr. 1B, H360D STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Specific concentration limits:

Name	Product identifier	Specific concentration limits
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
Nickel dichloride	(CAS-No.) 7718-54-9 (EC-No.) 231-743-0 (EC Index-No.) 028-011-00-6 (REACH-no) 01-2119486973-20	(0.01 ≤C < 100) Skin Sens. 1, H317 (0.1 <C < 1) STOT RE 2, H373 (1 ≤C < 100) STOT RE 1, H372 (20 ≤C < 100) Skin Irrit. 2, H315

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.

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

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)
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)
Ethane-1,2-diol (107-21-1)		
EU	IOEL TWA	52 mg/m³
EU	IOEL TWA [ppm]	20 ppm
EU	IOEL STEL	104 mg/m³
EU	IOEL STEL [ppm]	40 ppm
Belgium	OEL TWA	52 mg/m³
Belgium	OEL TWA [ppm]	20 ppm
Belgium	OEL STEL	104 mg/m³
Belgium	OEL STEL [ppm]	40 ppm
France	VME (OEL TWA)	52 mg/m³
France	VME (OEL TWA) [ppm]	20 ppm
France	VLE (OEL C/STEL)	104 mg/m³
France	VLE (OEL C/STEL) [ppm]	40 ppm
Netherlands	TGG-8u (OEL TWA)	52 mg/m³ (damp) 10 mg/m³ (druppels)
Netherlands	TGG-8u (OEL TWA) [ppm]	20 ppm (damp) 3.9 ppm (druppels)
Netherlands	TGG-15min (OEL STEL)	104 mg/m³ (damp)
Netherlands	TGG-15min (OEL STEL) [ppm]	40 ppm (damp)
United Kingdom	WEL TWA (OEL TWA) [1]	10 mg/m³ 52 mg/m³
United Kingdom	WEL TWA (OEL TWA) [2]	20 ppm
United Kingdom	WEL STEL (OEL STEL)	104 mg/m³

Ethane-1,2-diol (107-21-1)		
United Kingdom	WEL STEL (OEL STEL) [ppm]	40 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)
2-(2-butoxyethoxy)ethanol (112-34-5)		
EU	IOEL TWA	67.5 mg/m³
EU	IOEL TWA [ppm]	10 ppm
EU	IOEL STEL	101.2 mg/m³
EU	IOEL STEL [ppm]	15 ppm
Belgium	OEL TWA	67.5 mg/m³
Belgium	OEL TWA [ppm]	10 ppm
Belgium	OEL STEL	101.2 mg/m³
Belgium	OEL STEL [ppm]	15 ppm
France	VME (OEL TWA)	67.5 mg/m³
France	VME (OEL TWA) [ppm]	10 ppm
France	VLE (OEL C/STEL)	101.2 mg/m³
France	VLE (OEL C/STEL) [ppm]	15 ppm
Netherlands	TGG-8u (OEL TWA)	50 mg/m³
Netherlands	TGG-8u (OEL TWA) [ppm]	7.4 ppm
Netherlands	TGG-15min (OEL STEL)	100 mg/m³
Netherlands	TGG-15min (OEL STEL) [ppm]	15 ppm
United Kingdom	WEL TWA (OEL TWA) [1]	67.5 mg/m³
United Kingdom	WEL TWA (OEL TWA) [2]	10 ppm
United Kingdom	WEL STEL (OEL STEL)	101.2 mg/m³
United Kingdom	WEL STEL (OEL STEL) [ppm]	15 ppm
USA - ACGIH	ACGIH OEL TWA [ppm]	10 ppm (Inhalable fraction and vapor)
2-methyl-2-propanol (75-65-0)		
Belgium	OEL TWA	307 mg/m³
Belgium	OEL TWA [ppm]	100 ppm
France	VME (OEL TWA)	300 mg/m³
France	VME (OEL TWA) [ppm]	100 ppm
United Kingdom	WEL TWA (OEL TWA) [1]	308 mg/m³
United Kingdom	WEL TWA (OEL TWA) [2]	100 ppm
United Kingdom	WEL STEL (OEL STEL)	462 mg/m³
United Kingdom	WEL STEL (OEL STEL) [ppm]	150 ppm
USA - ACGIH	ACGIH OEL TWA [ppm]	100 ppm
Ethanol (64-17-5)		
Belgium	OEL TWA	1907 mg/m³
Belgium	OEL TWA [ppm]	1000 ppm
France	VME (OEL TWA)	1900 mg/m³
France	VME (OEL TWA) [ppm]	1000 ppm
France	VLE (OEL C/STEL)	9500 mg/m³
France	VLE (OEL C/STEL) [ppm]	5000 ppm
Netherlands	TGG-8u (OEL TWA)	260 mg/m³
Netherlands	TGG-8u (OEL TWA) [ppm]	136 ppm
Netherlands	TGG-15min (OEL STEL)	1900 mg/m³
Netherlands	TGG-15min (OEL STEL) [ppm]	992 ppm
United Kingdom	WEL TWA (OEL TWA) [1]	1920 mg/m³
United Kingdom	WEL TWA (OEL TWA) [2]	1000 ppm
USA - ACGIH	ACGIH OEL STEL [ppm]	1000 ppm
1,2-propanediol (57-55-6)		
United Kingdom	WEL TWA (OEL TWA) [1]	474 mg/m³ 10 mg/m³
United Kingdom	WEL TWA (OEL TWA) [2]	150 ppm
Iron(II) chloride (7758-94-3)		
Belgium	OEL TWA	1 mg/m³
United Kingdom	WEL TWA (OEL TWA) [1]	1 mg/m³
United Kingdom	WEL STEL (OEL STEL)	2 mg/m³

Iron(II) chloride (7758-94-3)		
USA - ACGIH	ACGIH OEL TWA	1 mg/m³
Iron(III) chloride (7705-08-0)		
Belgium	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
Nickel dichloride (7718-54-9)		
EU	IOEL TWA	0.01 mg/m³ (Respirable fraction) 0.1 mg/m³ (Inhalable fraction) 0.05 mg/m³ (Inhalable fraction)
Belgium	OEL TWA	0.1 mg/m³
United Kingdom	WEL TWA (OEL TWA) [1]	0.1 mg/m³
USA - ACGIH	ACGIH OEL TWA	0.1 mg/m³ (Inhalable fraction)

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	:	6.5 – 7.5
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	-18.5 °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	:	1.14 – 1.18
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	18 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

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))

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))

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	> 2.5 mg/l (6 h, Rat, Male / female, Experimental value, Inhalation (aerosol))

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, 14 day(s))
LD50 dermal rabbit	2764 mg/kg bodyweight (Equivalent or similar to OECD 402, Rabbit, Male, Experimental value, Dermal, 14 day(s))

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))

2-methyl-2-propanol (75-65-0)	
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	> 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	10470 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 15800 mg/kg bodyweight (Rabbit, Experimental value, Dermal)
LC50 Inhalation - Rat	124.7 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))

1,2-propanediol (57-55-6)	
LD50 oral rat	22000 mg/kg (Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	> 2000 mg/kg bodyweight (24 h, Rabbit, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 44.9 mg/l (4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 7 day(s))

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))

Iron(II) chloride (7758-94-3)	
LD50 oral rat	500 mg/kg bodyweight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)
LC50 Inhalation - Rat	> 1.1 mg/l (EPA OPP 81-3: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Read-across, Inhalation)

Iron(III) chloride (7705-08-0)	
LD50 oral rat	500 mg/kg bodyweight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Read-across, Oral, 14 day(s))
LD50 oral	1300 mg/kg bodyweight (Mouse, Female, Experimental value, Oral, 1 month(s))
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Read-across, 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, Inhalation)

Skin corrosion/irritation : Not classified
pH: 6.5 – 7.5

Serious eye damage/irritation : Not classified
pH: 6.5 – 7.5

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

Niagara^{C6} 3/3	
Viscosity, kinematic	18 mm²/s

SECTION 12: Ecological information

12.1. Toxicity

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)

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)
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)

Ethane-1,2-diol (107-21-1)	
LC50 - Fish [1]	> 72860 mg/l (EPA 600/4-90/027, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	> 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, Daphnia magna, Static system, Fresh water, Experimental value)

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 - Crustacea [1]	> 100 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 96 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)

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 - Crustacea [1]	933 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	> 976 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

Ethanol (64-17-5)	
LC50 - Fish [1]	15300 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 72h - Algae [1]	275 mg/l (Equivalent or similar to OECD 201, Chlorella vulgaris, Static system, Fresh water, Experimental value, Growth rate)

1,2-propanediol (57-55-6)	
LC50 - Fish [1]	40613 mg/l (96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value)
ErC50 algae	24200 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

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)

12.2. Persistence and degradability

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

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

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

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

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

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

1,2-propanediol (57-55-6)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.96 – 1.08 g O_2 /g substance
Chemical oxygen demand (COD)	1.63 g O_2 /g substance
ThOD	1.69 g O_2 /g substance

2,2',2"-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol (4719-04-4)	
Persistence and degradability	Readily biodegradable in water.

Iron(II) chloride (7758-94-3)	
Persistence and degradability	Readily biodegradable in water.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

Iron(III) chloride (7705-08-0)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

Nickel dichloride (7718-54-9)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Niagara^{C6} 3/3	
Bioaccumulative potential	The product is not expected to bioaccumulate.

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.

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).

Ethane-1,2-diol (107-21-1)	
Partition coefficient n-octanol/water (Log Pow)	-1.36 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.

2-(2-butoxyethoxy)ethanol (112-34-5)	
Partition coefficient n-octanol/water (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-propanol (75-65-0)	
Partition coefficient n-octanol/water (Log Pow)	0.317 (Practical experience/observation, 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)
Partition coefficient n-octanol/water (Log Pow)	-0.31 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.

1,2-propanediol (57-55-6)	
Partition coefficient n-octanol/water (Log Pow)	-1.07 (Experimental value, EU Method A.8: Partition Coefficient, 20.5 °C)
Bioaccumulative potential	Not bioaccumulative.

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.

Iron(II) chloride (7758-94-3)	
BCF - Fish [1]	< 20 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value)
Bioaccumulative potential	Not bioaccumulative.

Iron(III) chloride (7705-08-0)	
BCF - Fish [1]	≤ 100 (Pisces)
Bioaccumulative potential	Not bioaccumulative.

Nickel dichloride (7718-54-9)	
BCF - Fish [1]	40 – 1000 (Pisces, Nickel ion)
BCF - Other aquatic organisms [1]	0.9 – 11.6 (Daphnia magna, Nickel ion)
BCF - Other aquatic organisms [2]	250 – 1700 (Chlorophyta, Nickel ion)

12.4. Mobility 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.

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.

Ethane-1,2-diol (107-21-1)	
Surface tension	48.4 mN/m (20 °C)
Ecology - soil	Highly mobile in soil.

2-(2-butoxyethoxy)ethanol (112-34-5)	
Surface tension	27 mN/m (25 °C, 0.00212 mol/g)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.642 – 1 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

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)
Organic Carbon Normalized Adsorption Coefficient (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	22.31 mN/m (20 °C, 100 %)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.2 (log Koc, Experimental value)
Ecology - soil	Highly mobile in soil.

1,2-propanediol (57-55-6)	
Surface tension	71.6 mN/m (21.5 °C, 1.01 g/l, EU Method A.5: Surface tension)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.46 (log Koc, Calculated value)
Ecology - soil	Highly mobile in 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.

Iron(II) chloride (7758-94-3)	
Ecology - soil	No (test)data on mobility of the substance available.

Iron(III) chloride (7705-08-0)	
Surface tension	No data available in the literature

Iron(III) chloride (7705-08-0)	
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Results of PBT and vPvB assessment

Niagara^{C6} 3/3
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
Ethanol (64-17-5)	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
1,2-propanediol (57-55-6)	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
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-propanol (75-65-0)	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
Iron(II) chloride (7758-94-3)	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
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
Iron(III) chloride (7705-08-0)	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

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

ADR	IMDG	IATA	ADN	RID
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:	
28. Substances which are classified as carcinogen category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 1 or Appendix 2, respectively.	Nickel dichloride
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	Niagara^{C6} 3/3 ; 2-methyl-2,4-pentanediol ; Ethane-1,2-diol ; 2-(2-butoxyethoxy)ethanol ; 2-methyl-2-propanol ; Ethanol ; 2,2',2"-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol
30. Substances which are classified as reproductive toxicant category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 5 or Appendix 6, respectively.	Nickel dichloride
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

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 : Ethanol,Nickel dichloride are listed

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

SZW-lijst van reprotoxische stoffen – Borstvoeding : Ethanol,Nickel dichloride are listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : Ethanol,Nickel dichloride are listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : Ethanol,Nickel dichloride 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. 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Carc. 1A	Carcinogenicity (inhalation) Category 1A
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
H225	Highly flammable liquid and vapour.
H290	May be corrosive to metals.
H301	Toxic if swallowed.
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.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H360D	May damage the unborn child.
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.
Met. Corr. 1	Corrosive to metals, Category 1

Muta. 2	Germ cell mutagenicity, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Corr. 1	Skin corrosion/irritation, Category 1
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.