



V-09 Print date: 28.10.21 Page 1 of 23

1.1		substance/mixture and of the company/undertaking
1.1	Product identifier	
	STHAMEX [®] -AFFF 1%	› F-15 #4144
	UFI: STFC-M023-J00F-16CG	
1.2	Relevant identified uses of the	substance or mixture and uses advised against
	Use of the substance/mixture	
	Fire-extinguishing foam	
1.3	Details of the supplier of the sa	fety data sheet
	Manufacturer	Fabrik chemischer Präparate von Dr. R. Sthamer GmbH & Co. KG
	Street	Liebigstraße 5
	Postal code/City	D-22113 Hamburg
	Country	Deutschland
	Telephone	+49 (0)40/736168-0
	Telefax	+49 (0)40/736168-60
	E-mail (competent person)	labor@sthamer.com
	Website	http://sthamer.com
	Department responsible for information	Dr. Prall, +49 (0)40/736168-31
	Emergency telephone number	+49 (0)40/736168-0
1.4	Emergency telephone number	
	GIZ-Nord Poisons Centre of the University of Gö	ıttingen
	Telephone	+49 (0)551/19240

SECTION 2: Hazards identification

The information in this section and in all following sections (unless otherwise stated) refer to the product in the delivery condition (concentrate). The ready-to-use solutions prepared according to the dilution recommendation are to be classified differently (see Section 16).

	Classification according to R	egulation (EC) No 1272/2	2008 [CLP]					
	Skin Irrit. 2 H315 - Eye Irrit. 2 H319							
2.2	Label elements							
	Labelling according to Regul	ation (EC) No. 1272/2008	[CLP]					
	Hazard pictograms							
	Signal word	WARNING						
	Hazard statements	H315	Causes skin and eye irritation.					
		H319	Causes serious eye irritation.					
	Precautionary statements	P262	Do not get in eyes, on skin, or on clothing.					
		P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/					
		P301+P330+P331	F SWALLOWED: rinse mouth. Do NOT induce vomiting.					
		P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].					
		P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.					



S

V-09 Print date: 28.10.21 Page 2 of 23

Dr. STHAMER HAMBURG

	Classification procedure Bridging principle "Substantially similar mixtures".
2.3	Other hazards
	Endocrine disrupting properties
	Preparation related information
	There are no data available on the mixture itself.
	Information on ingredients 1,2-ETHANDIOL:
	This substance does not have endocrine disrupting properties with respect to humans. 1-BUTOXY-2-PROPANOL:
	This substance does not have endocrine disrupting properties with respect to humans.
	OCTYLSULFATE:
	This substance does not have endocrine disrupting properties with respect to humans. DECYLSULFATE:
	This substance does not have endocrine disrupting properties with respect to humans. ALKYLPOLYGLYCOSIDE:
	This substance does not have endocrine disrupting properties with respect to humans.
	FLUOROSURFACTANT:
	This substance does not have endocrine disrupting properties with respect to humans. INGREDIENTS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES:
	This substance does not have endocrine disrupting properties with respect to humans.
	Results of PBT and vPvB assessment
	Preparation related information
	There are no data available on the mixture itself.
	Information on ingredients
	1,2-ETHANDIOL:
	This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. 1-BUTOXY-2-PROPANOL:
	This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. OCTYLSULFATE:
	This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. DECYLSULFATE:
	This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. ALKYLPOLYGLYCOSIDE:
	This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. FLUOROSURFACTANT:
	This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
	INGREDIENTS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES:
	The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
	The data refer to the product as delivered. The solutions for use produced according to dilution recommendations are to be classified differently.
	Can harm the aquatic fauna when entering surface waters.
	Can harm the bacteria population in waste water treatment plants when entering the sewerage system.
	Breathing is not possible whilst submerged in the foam. Take care when spraying people!
	The product contains fluorosurfactants that are not completely biodegradable.
	Concentrated surfactant solutions always pose a danger to aquatic life because they greatly reduce the surface tension of water thus
	disrupting all life processes associated with it. In sewage treatment plants, for example, the necessary aeration of the sewage stages can be
	hindered by the strong foam formation.

SECTION 3: Composition / information on ingredients

3.1 Substances

not applicable





V-09 Print date: 28.10.21 Page 3 of 23

3.2 Mixtures

1,2-ETHANDIOL CAS No.: 107-21-1 EC No.: 203-473-3 REACH No.: 01-2119456816-28-XXXX Concentration: 5 - 10% Classification according to Regulation (EC) No 1272/2008 [CLP]: GHS07-GHS08; Acute Tox. 4-STOT RE 2; H302-H373.8

1-BUTOXY-2-PROPANOL

CAS No.: 5131-66-8 EC No.: 225-878-4 REACH No.: 01-2119475527-28-XXXX Concentration: 20 - 25% Classification according to Regulation (EC) No 1272/2008 [CLP]: GHS07; Eye Irrit. 2-Skin Irrit. 2; H315-H319

OCTYLSULFATE

CAS No.: 142-31-4 EC No.: 205-535-5 REACH No.: 01-2119966154-35-XXXX Concentration: 1 - 5% Classification according to Regulation (EC) No 1272/2008 [CLP]: GHS05; Skin Irrit. 2-Eye Dam. 1; H315-H318

DECYLSULFATE

CAS No.: 142-87-0 EC No.: 205-568-5 REACH No.: 01-2119970328-30-XXXX Concentration: 1 - 5% Classification according to Regulation (EC) No 1272/2008 [CLP]: GHS05; Acute Tox. 4-Skin Irrit. 2-Eye Dam. 1; H302-H315-H318

ALKYLPOLYGLYCOSIDE

CAS No.: 68515-73-1 EC No.: 500-220-1 REACH No.: 01-2119488530-36-XXXX Concentration: 5 - 10% Classification according to Regulation (EC) No 1272/2008 [CLP]: GHS05; Eye Dam. 1; H318

FLUOROSURFACTANT

Concentration: 1 - 5% The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

INGREDIENTS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES

Concentration: 5 - 10% The substances are not classified as dangerous according to Regulation (EC) No. 1272/2008 [CLP].

WATER

CAS No.: 7732-18-5 Concentration: 30 - 62% The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

The product does not contain any relevant amounts of substances that are on the SVHC list.

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

SECTION 4: First aid measures

4.1 Description of first aid measures





V-09 Print date: 28.10.21 Page 4 of 23

	General information
	Remove contaminated, saturated clothing immediately.
	Wash thoroughly the body (shower or bath).
	Observe risk of aspiration if vomiting occurs.
	When in doubt or if symptoms are observed, get medical advice.
	Following inhalation
	Provide fresh air.
	Consult a doctor immediately in the case of inhaling spray mist and show him packing or label.
	In case of skin contact
	Wash immediately with:: Water
	After eye contact
	In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.
	Following ingestion
	Do NOT induce vomiting.
	If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.
4.2	Most important symptoms and effects, both acute and delayed
	Dizziness
	Nausea
	Gastrointestinal complaints
4.3	Indication of any immediate medical attention and special treatment needed
	If unconscious but breathing normally, place in recovery position and seek medical advice.
	IF SWALLOWED: Immediately call a POISON CENTER/doctor/

SECTION 5: Firefighting measures

5.1 Extinguishing media

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

5.2 Special hazards arising from the substance or mixture

The product itself does not burn.

5.3 Advice for firefighters

Regardless of the admixture of a foam agent, extinguishing water can be heavily contaminated with hazardous substances due to the absorption of fire residues and should therefore, if possible, not enter the sewage system or bodies of water.

SECTION 6: Accidental release measures

6.1 **Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation.

6.2 Environmental precautions

Cover drains.

Do not allow to enter into soil/subsoil.

Do not allow to enter into surface water or drains.





V-09 Print date: 28.10.21 Page 5 of 23

6.3 Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal. Treat the recovered material as prescribed in the section on waste disposal. Suitable material for taking up Sand Sawdust Chemical binding agents, containing acids

6.4 Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8 Disposal: see section 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid Skin contact Eye contact Wear personal protection equipment (refer to section 8).

Measures to prevent fire

The product is not oxidising Combustible Flammable Explosive Highly flammable No special fire protection measures are necessary.

Environmental precautions

Shafts and sewers must be protected from entry of the product.

Advices on general occupational hygiene

When using do not eat, drink, smoke, sniff.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions Do not store at temperatures above: +50°C

Requirements for storage rooms and vessels

Suitable container/equipment material Refined steel Polyethylene (PE) Unsuitable container/equipment material Aluminium Light metal Copper Zinc Alloy, containing copper Alloy, contains light metal Iron.





V-09 Print date: 28.10.21 Page 6 of 23

Steel

Hints on joint storage

Storage class

12: non-combustible liquids that cannot be assigned to any of the above storage classes

7.3 Specific end use(s)

Fire-extinguishing foams based on synthetic surfactants Do not use for cleaning purposes.

Recommendation

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Substance name: 1,2-ETHANDIOL

CAS No.: 107-21-1

REACH No.: 01-2119456816-28-XXXX

United Kingdom

Long-term occupational exposure limit value: 20 ppm; Limit value type (country of origin): TWA (EN) short-term occupational exposure limit value: 40 ppm; Limit value type (country of origin): STEL (EN) **European Union** Long-term occupational exposure limit value: 20 ppm; Limit value type (country of origin): TWA (EC)

short-term occupational exposure limit value: 40 ppm; Limit value type (country of origin): STEL (EC) **Germany**

Long-term occupational exposure limit value: 10 ppm; Limit value type (country of origin): AGW (DE) short-term occupational exposure limit value: 20 ppm; Limit value type (country of origin): Peak (DE) Ireland

Long-term occupational exposure limit value: 20 ppm; Limit value type (country of origin): TWA (IE) short-term occupational exposure limit value: 40 ppm; Limit value type (country of origin): STEL (IE)

8.2 Exposure controls

Advices on general occupational hygiene

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

Avoid contact with skin, eyes and clothes. Remove contaminated, saturated clothing.

Wash contaminated clothing prior to re-use. Wash hands before breaks and after work.

Apply alignees and before breaks and aller w

Apply skin care products after work.

Eye/face protection

Suitable eye protection Eye glasses with side protection goggles Face protection shield Recommended eye protection articles DIN EN 166

Hand protection

Suitable gloves type Gloves with long cuffs Suitable material



S

V-09 Print date: 28.10.21 Page 7 of 23

Dr. STHAMER HAMBURG

NBR (Nitrile rubber) Butyl caoutchouc (butyl rubber) Breakthrough time 120 min. Thickness of the glove material > 0.6 mm Recommended glove articles EN ISO 374 Breakthrough times and swelling properties of the material must be taken into consideration.

Body protection

Body protection: not required.

Respiratory protection

Usually no personal respirative protection necessary.

Environmental exposure controls

Store concentrate according to national regulations. Do not let the concentrate get into the environment. If possible, hold back the application solution and dispose of after use.

SECTION 9: Physical and chemical properties

a)	Physical state			:	Liquid		
b)	Colour			:	colourless / yellow		
C)	Odour			:	Glycol, Ether, Surfactant		
d)	Melting point/freezin	g point		:	-15°C	EN 1568:2018	1
e)	Melting point/freezin	g point		:	> 100°C	DIN 51751	
f)	Flammability			:	not applicable		
g)	Lower and upper exp	plosion limit/fla	mmability				
	limit			:	No data available		
h)	Flash point			:	No flash point up to 100 °C.		
i)	Ignition temperature			:	not applicable		
j)	Decomposition temp	perature		:	No data available		
k)	рН	at °C	=•	:		DIN 19268	
I)	Viscosity	at °C	20	:	< 15 mm²/s	DIN 51562	Newton
		at °C	-15	:	< 60 mm²/s	DIN 51562	Newton
m)				:	Water: completely miscible	OECD 105	
n)	Partition coefficient	n-octanol/wate	r (log				
	value)			:	not applicable		
0)	Vapour pressure			:	No data available		
p)	Density and/or relati					DIN 40704	
	density	at °C	20	:	1,000 - 1,040 g/ml	DIN 12791	
q)	Relative vapour dens	•		:	No data available		
r)	particle characteristi	CS .		:	not applicable		
	her information	-					
Inf	ormation with reg	ard to physi	ical haza	rd o	classes		
a)	Explosives			:	not applicable		
b)	Explosives			:	not applicable		
C)	Aerosols			:	not applicable		



S

V-09 Print date: 28.10.21 Page 8 of 23

Dr. STHAMER HAMBURG

d)	Oxidising gas	:	not applicable
e)	Gases under pressure	:	not applicable
f)	Flammable liquids	:	not applicable
g)	Flammable solids	:	not applicable
h)	Self-reactive substances and mixtures	:	not applicable
i)	Pyrophoric liquids	:	not applicable
j)	Pyrophoric solids	:	not applicable
k)	Self-heating substances and mixtures	:	not applicable
I)	Substances or mixtures which, in contact with		
	water, emit flammable gases	:	not applicable
m)	Oxidising liquids	:	not applicable
n)	Oxidizing solids	:	not applicable
o)	Organic peroxides	:	not applicable
р)	Corrosive to metals	:	See section 7 of the safety data sheet.
q)	Desensitised explosives	:	not applicable
Ot	her safety characteristics		
a)	Mechanical sensitivity	:	not applicable
b)	Self-accelerating polymerisation temperature		
	(SAPT)	:	not applicable
c)	formation of explosible dust/air mixtures	:	not applicable
d)	acid/alkaline reserve	:	not applicable
e)	Evaporation rate	:	No data available
f)	miscibility	:	Water: completely miscible
g)	Conductivity	:	~ 10000 µS/cm
h)	Corrosiveness	:	Skin corrosion/irritation: irritant
			Serious eye damage/irritation: irritant
i)	gas group	:	not applicable
j)	Redox potential	:	not applicable
k)	radical formation potential	:	not applicable
I)	photocatalytic properties	:	not applicable
	ditional hazards		
Bre	athing is not possible whilst submerged in the foam	. Ta	ke care when spraying people!

SECTION 10: Stability and reactivity

40.4	Percetivity
10.1	Reactivity Materials to avoid
	Alkali (lye), concentrated
	Alkali metals
	Acid, concentrated
	Oxidising agent, strong
	Reducing agent, strong
	Acid halides
10.2	Chemical stability
	No special measures are necessary.
10.3	Possibility of hazardous reactions
	No special measures are necessary.





V-09 Print date: 28.10.21 Page 9 of 23

10.4 Conditions to avoid

Do not store at temperatures above: +50°C

10.5 Incompatible materials

See section 7. No additional measures necessary.

10.6 Hazardous decomposition products

Pyrolysis products, containing fluorine

Fluorinated hydrocarbons

Hydrofluoric acid

SECTION 11: Toxicological information

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

Test was carried out with a similar preparation/mixture.

Preparation rel	ated information	
LD50	> 2000 mg/kg	The acute oral toxicity is corresponding to GHS-category 5.
Species	Rat	
Method	Bridging principle	"Substantially similar mixtures".
Information on		•
1,2-ETHANDIC		
,	(7d) 2310 mg/kg ==>	
	ful if swallowed.	
(Sour	ce: ECHA database «R	egistered substances»)
1-BUTOXY-2-H		
LC50	(14d) 3300 mg/kg ==>	
The a	cute oral toxicity is corre	esponding to GHS-category 5.
(Sour	ce: ECHA database «R	egistered substances»)
OCTYLSULFA	TE:	
	(14d) > 2000 mg/kg ==	
	•	esponding to GHS-category 5.
		egistered substances»)
DECYLSULFA		
	(14d) 1200 mg/kg ==>	
	ful if swallowed.	
		egistered substances»)
ALKYLPOLYG		
	(14d) > 2000 mg/kg ==	
		esponding to GHS-category 5.
•		egistered substances»)
FLUOROSURI		~
	(14d) > 5000 mg/kg ==	> esponding to GHS-category 5.
	ce: Safety Data Sheet)	esponding to GRS-category 5.
•	• /	S HAZARDOUS SUBSTANCES:
		ified as dangerous according to Regulation (EC) No. 1272/2008 [CLP].
		Henentioned hazard class
	ce: Safety Data Sheet)	THEI LIVIEU HAZAIU UASS

Preparation related information





V-09 Print date: 28.10.21 Page 10 of 23

There are no	data available on the mixture itself.
Information c	on ingredients
1,2-ETHAND	DIOL:
LDS	50 (14d) > 3500 mg/kg ==>
	acute dermal toxicity is corresponding to GHS-category 5.
	urce: ECHA database «Registered substances»)
	2-PROPANOL:
	50 (14d) > 2000 mg/kg ==>
	e acute dermal toxicity is corresponding to GHS-category 5.
	urce: ECHA database «Registered substances»)
OCTYLSUL	÷ ,
	50 (14d) > 2000 mg/kg ==>
	e acute dermal toxicity is corresponding to GHS-category 5.
	urce: ECHA database «Registered substances»)
DECYLSUL	
	50 (14d) > 2000 mg/kg ==>
	e acute dermal toxicity is corresponding to GHS-category 5.
	urce: ECHA database «Registered substances»)
	(GLYCOSIDE:
	50 (14d) > 2000 mg/kg ==>
	e acute dermal toxicity is corresponding to GHS-category 5.
	urce: ECHA database «Registered substances»)
FLUOROSU	- ,
	data available
	information available. No classification in the above-mentioned hazard class
	urce: Safety Data Sheet)
•	TS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES:
	e substances are not classified as dangerous according to Regulation (EC) No. 1272/2008 [CLP].
	classification in the above-mentioned hazard class
	urce: Safety Data Sheet)
(00)	
Acute inhals	ation toxicity
	elated information
	data available on the mixture itself.
	n ingredients
1,2-ETHAND	
	50 (6h) > 2.5 mg/L ==>
	acute inhalation toxicity related to vapours is corresponding to GHS-category 5.
	urce: ECHA database «Registered substances»)
	2-PROPANOL:
	EC (4h) 651 ppm; LC50 (4h) > 3,5 mg/L ==>
	acute inhalation toxicity related to vapours is corresponding to GHS-category 5.
	urce: Safety Data Sheet)
OCTYLSULI	
	data available
	information available. No classification in the above-mentioned hazard class
	urce: Safety Data Sheet)
DECYLSUL	FATE:
No	data available
No	information available. No classification in the above-mentioned hazard class
(So	urce: Safety Data Sheet)
ALKYLPOLY	/GLYCOSIDE:
No	data available
No	information available. No classification in the above-mentioned hazard class
(So	urce: Safety Data Sheet)
FLUOROSU	RFACTANT:





V-09 Print date: 28.10.21 Page 11 of 23

No data available No information available. No classification in the above-mentioned hazard class (Source: Safety Data Sheet) INGREDIENTS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES: The substances are not classified as dangerous according to Regulation (EC) No. 1272/2008 [CLP]. No classification in the above-mentioned hazard class (Source: Safety Data Sheet) b) Skin corrosion/irritation Preparation related information Causes skin irritation. Species Method Bridging principle "Substantially similar mixtures". Information on ingredients 1,2-ETHANDIOL: non-irritant. (Source: Safety Data Sheet) 1-BUTOXY-2-PROPANOL: Causes skin irritation. (Source: Safety Data Sheet) OCTYLSULFATE: Causes skin irritation. (Source: Safety Data Sheet) DECYLSULFATE: Causes skin irritation. (Source: Safety Data Sheet) ALKYLPOLYGLYCOSIDE: non-irritant. (Source: Safety Data Sheet) FLUOROSURFACTANT: non-irritant. (Source: Safety Data Sheet) INGREDIENTS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES: non-irritant. (Source: Safety Data Sheet) c) Serious eye damage/irritation Preparation related information Causes eye irritation. Species Method Bridging principle "Substantially similar mixtures". Information on ingredients 1,2-ETHANDIOL: non-irritant. (Source: Safety Data Sheet) 1-BUTOXY-2-PROPANOL: Causes serious eye irritation. (Source: Safety Data Sheet) OCTYLSULFATE: Causes serious eye damage. (Source: Safety Data Sheet) DECYLSULFATE: Causes serious eye damage. (Source: Safety Data Sheet) ALKYLPOLYGLYCOSIDE: Causes serious eye damage.





V-09 Print date: 28.10.21 Page 12 of 23

(Source: Safety Data Sheet) FLUOROSURFACTANT: non-irritant. (Source: Safety Data Sheet) INGREDIENTS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES: non-irritant. (Source: Safety Data Sheet) d) Respiratory or skin sensitisation Preparation related information There are no data available on the mixture itself. Information on ingredients 1,2-ETHANDIOL: not sensitising. (Source: Safety Data Sheet) 1-BUTOXY-2-PROPANOL: not sensitising. (Source: Safety Data Sheet) OCTYLSULFATE: not sensitising. (Source: Safety Data Sheet) DECYLSULFATE: not sensitising. (Source: Safety Data Sheet) ALKYLPOLYGLYCOSIDE: not sensitising. (Source: Safety Data Sheet) FLUOROSURFACTANT: not sensitising. (Source: Safety Data Sheet) INGREDIENTS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES: not sensitising. (Source: Safety Data Sheet) e) Germ cell mutagenicity Preparation related information There are no data available on the mixture itself. Information on ingredients 1,2-ETHANDIOL: No indications of human germ cell mutagenicity exist. (Source: Safety Data Sheet) 1-BUTOXY-2-PROPANOL: No indications of human germ cell mutagenicity exist. (Source: Safety Data Sheet) OCTYLSULFATE: No indications of human germ cell mutagenicity exist. (Source: Safety Data Sheet) DECYLSULFATE: No indications of human germ cell mutagenicity exist. (Source: Safety Data Sheet) ALKYLPOLYGLYCOSIDE: No indications of human germ cell mutagenicity exist. (Source: Safety Data Sheet) FLUOROSURFACTANT: No indications of human germ cell mutagenicity exist. (Source: Safety Data Sheet)





V-09 Print date: 28.10.21 Page 13 of 23

	ations of human germ cell mutagenicity exist.
(Source	: Safety Data Sheet)
f) Carcinogen	icity
Preparation relate	ed information
	a available on the mixture itself.
Information on in	
1,2-ETHANDIOL	
,	ation of human carcinogenicity.
	: Safety Data Sheet)
1-BUTOXY-2-PR	
	ation of human carcinogenicity.
	: Safety Data Sheet)
OCTYLSULFAT	
	 ation of human carcinogenicity.
	: Safety Data Sheet)
DECYLSULFAT	
	ation of human carcinogenicity.
	: Safety Data Sheet)
ALKYLPOLYGL	
	ation of human carcinogenicity.
	: Safety Data Sheet)
FLUOROSURFA	
	ation of human carcinogenicity.
	: Safety Data Sheet)
· ·	NOT CLASSIFIED ÁS HAZARDOUS SUBSTANCES:
No indic	ation of human carcinogenicity.
	ation of human carcinogenicity. : Safety Data Sheet)
	ation of human carcinogenicity. : Safety Data Sheet)
(Source	: Safety Data Sheet)
(Source) g) Reproductiv	: Safety Data Sheet) ve toxicity
(Source g) Reproductiv Preparation relate	: Safety Data Sheet) ve toxicity ed information
(Source g) Reproductive Preparation related There are no data	: Safety Data Sheet) ve toxicity ed information a available on the mixture itself.
(Source g) Reproductiv Preparation relate There are no data Information on ing	: Safety Data Sheet) re toxicity <u>ed information</u> a available on the mixture itself. <u>gredients</u>
(Source g) Reproduction Preparation related There are no data Information on in- 1,2-ETHANDIOL	: Safety Data Sheet) /e toxicity <u>ed information</u> a available on the mixture itself. <u>gredients</u> :
(Source g) Reproductive Preparation related There are no data Information on in- 1,2-ETHANDIOL No indice	: Safety Data Sheet) ve toxicity ad information a available on the mixture itself. gredients : ations of human reproductive toxicity exist.
(Source g) Reproductive Preparation related There are no data Information on in- I,2-ETHANDIOL No indice (Source	: Safety Data Sheet) ve toxicity <u>ed information</u> a available on the mixture itself. <u>gredients</u> : ations of human reproductive toxicity exist. : Safety Data Sheet)
(Source) g) Reproductive Preparation related There are no data Information on ing 1,2-ETHANDIOL No indice (Source) 1-BUTOXY-2-PR	: Safety Data Sheet) ve toxicity ed information a available on the mixture itself. gredients : ations of human reproductive toxicity exist. : Safety Data Sheet) : :OPANOL:
(Source g) Reproductive Preparation related There are no data Information on inu 1,2-ETHANDIOL No indice (Source 1-BUTOXY-2-PR No indice	: Safety Data Sheet) ve toxicity ed information a available on the mixture itself. gredients : ations of human reproductive toxicity exist. : Safety Data Sheet) <i>IOPANOL:</i> ations of human reproductive toxicity exist.
(Source g) Reproductive Preparation related There are no data Information on inu 1,2-ETHANDIOL No indic (Source 1-BUTOXY-2-PR No indic (Source)	: Safety Data Sheet) ve toxicity ed information a available on the mixture itself. gredients : ations of human reproductive toxicity exist. : Safety Data Sheet) <i>OPANOL:</i> ations of human reproductive toxicity exist. : Safety Data Sheet)
(Source g) Reproductive Preparation related There are no data Information on invite (Source 1-BUTOXY-2-PR No indice (Source OCTYLSULFATE	: Safety Data Sheet) re toxicity <u>ed information</u> a available on the mixture itself. <u>gredients</u> : ations of human reproductive toxicity exist. : Safety Data Sheet) <i>tOPANOL:</i> ations of human reproductive toxicity exist. : Safety Data Sheet) : : Safety Data Sheet) ::
(Source) g) Reproductive Preparation related There are no data Information on invite (Source) 1-BUTOXY-2-PFR No indice (Source) OCTYLSULFATE No indice No indice No indice No indice	: Safety Data Sheet) /e toxicity ed information a available on the mixture itself. gredients : ations of human reproductive toxicity exist. : Safety Data Sheet) /OPANOL: ations of human reproductive toxicity exist. : Safety Data Sheet) : : Safety Data Sheet)
(Source g) Reproductive Preparation relate There are no data Information on invi 1,2-ETHANDIOL No indice (Source OCTYLSULFATI No indice (Source OCTYLSULFATI No indice (Source)	: Safety Data Sheet) /e toxicity ed information a available on the mixture itself. gredients : ations of human reproductive toxicity exist. : Safety Data Sheet) :/OPANOL: ations of human reproductive toxicity exist. : Safety Data Sheet) :: ations of human reproductive toxicity exist. : Safety Data Sheet) :: ations of human reproductive toxicity exist. : Safety Data Sheet) ::
(Source g) Reproductive Preparation relate There are no data Information on ine 1,2-ETHANDIOL No indice (Source OCTYLSULFATE No indice (Source OCTYLSULFATE No indice (Source DECYLSULFATE	: Safety Data Sheet) re toxicity ed information a available on the mixture itself. gredients : ations of human reproductive toxicity exist. : Safety Data Sheet) <i>YOPANOL:</i> ations of human reproductive toxicity exist. : Safety Data Sheet) : : : Safety Data Sheet) : : : : Safety Data Sheet) : : : : Safety Data Sheet) : : : : : : : : : : : : :
(Source g) Reproductive Preparation relate There are no data Information on ing 1,2-ETHANDIOL No indice (Source OCTYLSULFATI No indice (Source DECYLSULFATI No indice No indice DECYLSULFATI No indice	: Safety Data Sheet) re toxicity ed information a available on the mixture itself. gredients : ations of human reproductive toxicity exist. : Safety Data Sheet) <i>YOPANOL:</i> ations of human reproductive toxicity exist. : Safety Data Sheet) : : ations of human reproductive toxicity exist. : Safety Data Sheet) : : ations of human reproductive toxicity exist. : Safety Data Sheet) : : ations of human reproductive toxicity exist.
(Source g) Reproductive Preparation related There are no data Information on inu 1,2-ETHANDIOL No indice (Source OCTYLSULFATI No indice (Source DECYLSULFATI No indice (Source) DECYLSULFATI No indice (Source)	: Safety Data Sheet) re toxicity ed information a available on the mixture itself. gredients : ations of human reproductive toxicity exist. : Safety Data Sheet) <i>OPANOL:</i> ations of human reproductive toxicity exist. : Safety Data Sheet) : : : Safety Data Sheet)
(Source g) Reproductive Preparation related There are no data Information on inu 1,2-ETHANDIOL No indic (Source OCTYLSULFATI No indic (Source DECYLSULFATI No indic (Source DECYLSULFATI No indic (Source ALKYLPOLYGL	: Safety Data Sheet) re toxicity ed information a available on the mixture itself. gredients : ations of human reproductive toxicity exist. : Safety Data Sheet) <i>IOPANOL:</i> ations of human reproductive toxicity exist. : Safety Data Sheet) : : ations of human reproductive toxicity exist. : Safety Data Sheet) : : ations of human reproductive toxicity exist. : Safety Data Sheet) : : ations of human reproductive toxicity exist. : Safety Data Sheet) : : : : : : : : : : : : :
(Source g) Reproductive Preparation related There are no data Information on inu 1,2-ETHANDIOL No indice (Source OCTYLSULFATT No indice (Source DECYLSULFATT No indice (Source DECYLSULFATT No indice (Source ALKYLPOLYGL No indice	: Safety Data Sheet) re toxicity ed information a available on the mixture itself. gredients : ations of human reproductive toxicity exist. : Safety Data Sheet) : : : Safety Data Sheet) : : Safety Data Sheet) : Safety Data S
(Source g) Reproductive Preparation related There are no data Information on inu 1,2-ETHANDIOL No indic (Source 1-BUTOXY-2-PR No indic (Source OCTYLSULFATI No indic (Source DECYLSULFATI No indic (Source ALKYLPOLYGLY No indic (Source)	: Safety Data Sheet) re toxicity ad information a available on the mixture itself. gredients : ations of human reproductive toxicity exist. : Safety Data Sheet) COPANOL: ations of human reproductive toxicity exist. : Safety Data Sheet) : : ations of human reproductive toxicity exist. : Safety Data Sheet) : : ations of human reproductive toxicity exist. : Safety Data Sheet) : : ations of human reproductive toxicity exist. : Safety Data Sheet) //COSIDE: ations of human reproductive toxicity exist. : Safety Data Sheet) //COSIDE: ations of human reproductive toxicity exist. : Safety Data Sheet)
(Source g) Reproductive Preparation related There are no data Information on inner 1,2-ETHANDIOL No indice (Source 1-BUTOXY-2-PR No indice (Source OCTYLSULFATI No indice (Source DECYLSULFATI No indice (Source ALKYLPOLYGL' No indice (Source ALKYLPOLYGL'	: Safety Data Sheet) re toxicity ad information a available on the mixture itself. gredients : ations of human reproductive toxicity exist. : Safety Data Sheet) COPANOL: ations of human reproductive toxicity exist. : Safety Data Sheet) : ations of human reproductive toxicity exist. : Safety Data Sheet) : ations of human reproductive toxicity exist. : Safety Data Sheet) : ations of human reproductive toxicity exist. : Safety Data Sheet) : ations of human reproductive toxicity exist. : Safety Data Sheet) : ations of human reproductive toxicity exist. : Safety Data Sheet) : ations of human reproductive toxicity exist. : Safety Data Sheet) : COSIDE: ations of human reproductive toxicity exist. : Safety Data Sheet) CTANT:
(Source g) Reproductive Preparation relate There are no data Information on invi 1,2-ETHANDIOL No indice (Source 1-BUTOXY-2-PFR No indice (Source OCTYLSULFATI No indice (Source DECYLSULFATI No indice (Source ALKYLPOLYGL' No indice (Source FLUOROSURFA No indice (Source)	: Safety Data Sheet) re toxicity ad information a available on the mixture itself. gredients ations of human reproductive toxicity exist. Safety Data Sheet) OPANOL: ations of human reproductive toxicity exist. Safety Data Sheet) COPANOL: ations of human reproductive toxicity exist. Safety Data Sheet) COSIDE: ations of human reproductive toxicity exist. Safety Data Sheet) COSIDE: ations of human reproductive toxicity exist. Safety Data Sheet) CTANT: ations of human reproductive toxicity exist.
(Source g) Reproductive Preparation relate There are no data Information on invi 1,2-ETHANDIOL No indice (Source 1-BUTOXY-2-PFR No indice (Source DECYLSULFATI No indice (Source ALKYLPOLYGL' No indice (Source FLUOROSURFA No indice (Source)	: Safety Data Sheet) re toxicity ad information a available on the mixture itself. gredients ations of human reproductive toxicity exist. Safety Data Sheet) (OPANOL: ations of human reproductive toxicity exist. Safety Data Sheet) ations of human reproductive toxicity exist. Safety Data Sheet) ations of human reproductive toxicity exist. Safety Data Sheet) ations of human reproductive toxicity exist. Safety Data Sheet) <i>COSIDE:</i> ations of human reproductive toxicity exist. Safety Data Sheet) <i>CTANT:</i> ations of human reproductive toxicity exist. Safety Data Sheet)
(Source g) Reproductive Preparation relate There are no data Information on inv 1,2-ETHANDIOL No indice (Source 1-BUTOXY-2-PFR No indice (Source OCTYLSULFATI No indice (Source ALKYLPOLYGL' No indice (Source ALKYLPOLYGL' No indice (Source FLUOROSURFA No indice (Source INGREDIENTS I	: Safety Data Sheet) re toxicity sed information a available on the mixture itself. gredients ations of human reproductive toxicity exist. Safety Data Sheet) (OPANOL: ations of human reproductive toxicity exist. Safety Data Sheet) E: ations of human reproductive toxicity exist. Safety Data Sheet) E: ations of human reproductive toxicity exist. Safety Data Sheet) (COSIDE: ations of human reproductive toxicity exist. Safety Data Sheet) (COSIDE: ations of human reproductive toxicity exist. Safety Data Sheet) (COSIDE: ations of human reproductive toxicity exist. Safety Data Sheet) (COSIDE: ations of human reproductive toxicity exist. Safety Data Sheet) (COSIDE: ations of human reproductive toxicity exist. Safety Data Sheet) (COSIDE: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of human reproductive toxicity exist. Safety Data Sheet) (CTANT: ations of
(Source Preparation relate There are no data Information on inv 1,2-ETHANDIOL No indic (Source 1-BUTOXY-2-PR No indic (Source 1-BUTOXY-2-PR No indic (Source 0CTYLSULFATI No indic (Source ALKYLPOLYGL' No indic (Source FLUOROSURFA No indic (Source FLUOROSURFA No indic (Source FLUOROSURFA No indic	: Safety Data Sheet) re toxicity ad information a available on the mixture itself. gredients ations of human reproductive toxicity exist. Safety Data Sheet) (OPANOL: ations of human reproductive toxicity exist. Safety Data Sheet) ations of human reproductive toxicity exist. Safety Data Sheet) ations of human reproductive toxicity exist. Safety Data Sheet) ations of human reproductive toxicity exist. Safety Data Sheet) <i>COSIDE:</i> ations of human reproductive toxicity exist. Safety Data Sheet) <i>CTANT:</i> ations of human reproductive toxicity exist. Safety Data Sheet)





V-09 Print date: 28.10.21 Page 14 of 23

There a	re no data available on the mixture itself.
	tion on ingredients
	IANDIOL:
.,	No known symptoms to date.
	(Source: Safety Data Sheet)
1-BUT	XY-2-PROPANOL:
	No known symptoms to date.
	(Source: Safety Data Sheet)
OCTYL	SULFATE:
	No known symptoms to date.
	(Source: Safety Data Sheet)
DECYL	SULFATE:
	No known symptoms to date.
	(Source: Safety Data Sheet)
ALKYL	POLYGLYCOSIDE:
	No known symptoms to date.
	(Source: Safety Data Sheet)
FLUOR	OSURFACTANT:
	No known symptoms to date.
	(Source: Safety Data Sheet)
INGRE	DIENTS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES:
	No known symptoms to date.
	(Source: Safety Data Sheet)
i) ST	OT-repeated exposure
-	tion related information
	re no data available on the mixture itself.
	tion on ingredients
1,2-E11	IANDIOL:
	May cause damage to kidneys through prolonged or repeated exposure if swallowed.
1 DI IT	(Source: Safety Data Sheet))XY-2-PROPANOL:
1-0010	No known symptoms to date.
	(Source: Safety Data Sheet)
OCTVI	SULFATE:
JUIL	No known symptoms to date.
	(Source: Safety Data Sheet)
DECVI	SULFATE:
	No known symptoms to date.
	(Source: Safety Data Sheet)
AI KYI	POLYGLYCOSIDE:
	No known symptoms to date.
	(Source: Safety Data Sheet)
FLUOR	OSURFACTANT:
	No known symptoms to date.
	(Source: Safety Data Sheet)
INGRE	DIENTS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES:
	No known symptoms to date.
	(Source: Safety Data Sheet)
•••	piration hazard
	tion related information
	re no data available on the mixture itself.
<u>Informa</u>	tion on ingredients





V-09 Print date: 28.10.21 Page 15 of 23

1,2-ETHANDIOL:	
No known symptoms to date. (Source: Safety Data Sheet)	
1-BUTOXY-2-PROPANOL:	
No known symptoms to date.	
(Source: Safety Data Sheet)	
OCTYLSULFATE:	
No known symptoms to date.	
(Source: Safety Data Sheet)	
DECYLSULFATE:	
No known symptoms to date.	
(Source: Safety Data Sheet)	
ALKYLPOLYGLYCOSIDE:	
No known symptoms to date.	
(Source: Safety Data Sheet)	
FLUOROSURFACTANT:	
No known symptoms to date.	
(Source: Safety Data Sheet)	
INGREDIENTS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES:	
No known symptoms to date.	
(Source: Safety Data Sheet)	
11.2 Information on other hazards	
Endocrine disrupting properties	
Preparation related information	
There are no data available on the mixture itself.	
Information on ingredients	
1,2-ETHANDIOL:	
This substance does not have endocrine disrupting properties with respect to humans.	
(Source: Safety Data Sheet)	
1-BUTOXY-2-PROPANOL:	
This substance does not have endocrine disrupting properties with respect to humans.	
(Source: Safety Data Sheet)	
OCTYLSULFATE:	
This substance does not have endocrine disrupting properties with respect to humans.	
(Source: Safety Data Sheet)	
DECYLSULFATE:	
This substance does not have endocrine disrupting properties with respect to humans.	
(Source: Safety Data Sheet)	
ALKYLPOLYGLYCOSIDE:	
This substance does not have endocrine disrupting properties with respect to humans.	
(Source: Safety Data Sheet)	
FLUOROSURFACTANT:	
This substance does not have endocrine disrupting properties with respect to humans.	
(Source: Safety Data Sheet)	
INGREDIENTS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES:	
This substance does not have endocrine disrupting properties with respect to humans.	
(Source: Safety Data Sheet)	
Other information	
Breathing is not possible whilst submerged in the foam. Take care when spraying people!	

SECTION 12: Ecological information

12.1 Toxicity



V-09 Print date: 28.10.21 Page 16 of 23

S *Dr. STHAMER* **HAMBURG**

Preparation related infor		. > 10 < 100*	
Effective dose	LC50	: > 10 < 100*	mg/L
Exposure time		: 96 h	(relden orfe)
Species		: Leuciscus idus	
Method		: Bridging princi	ple "Substantially similar mixtures".
Information on ingredien	<u>nts</u>		
1,2-ETHANDIOL:			
LC50 (96h) > 7	•		
`		e «Registered su	bstances»)
1-BUTOXY-2-PROPAN			
LC50 (96h) 560		D	
	A database	e «Registered su	bstances»)
OCTYLSULFATE:	00 //		
		NOEC (96h) 100	
•	A database	e «Registered su	Dstances»)
DECYLSULFATE:			
LC50 (48h) 13	•	Desistended	
(Source: ECHA ALKYLPOLYGLYCOSI		e «Registered su	Dstances»)
LC50 (96h) 10	-	"Decistered au	hatanaaa.)
FLUOROSURFACTAN		e «Registered su	ustances»)
LC50 (96h) 650			
(Source: Safet	-	aat)	
INGREDIENTS NOT CL	•	,	
		ove-mentioned	
	n in the at	Jove-menuoneu i	
(Course) Cofeh	Data Ch	+)	
(Source: Safet	y Data She	eet)	
Acute (short-term) tox	icity to cr		
Acute (short-term) toxi Preparation related infor	icity to cr e mation	ustacea	
Acute (short-term) toxi Preparation related infor Effective dose	icity to cr	ustacea : > 10 < 100*	mg/L
Acute (short-term) toxi Preparation related infor Effective dose Exposure time	icity to cr e mation	ustacea : > 10 < 100* : 48 h	mg/L
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species	icity to cr e mation	ustacea : > 10 < 100* : 48 h : Daphnia magr	mg/L na (Big water flea)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time	icity to cr e mation	ustacea : > 10 < 100* : 48 h : Daphnia magr	mg/L
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species	icity to cro mation EC50	ustacea : > 10 < 100* : 48 h : Daphnia magr	mg/L na (Big water flea)
Acute (short-term) toxi <u>Preparation related infor</u> Effective dose Exposure time Species Method	icity to cro mation EC50	ustacea : > 10 < 100* : 48 h : Daphnia magr	mg/L na (Big water flea)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) >	icity to cro mation EC50 nts 13900 mg	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L	mg/L na (Big water flea) iple "Substantially similar mixtures".
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) >	icity to cro mation EC50 nts 13900 mg	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi	mg/L na (Big water flea) iple "Substantially similar mixtures".
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) >	icity to cr mation EC50 ts 13900 mg A database	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L	mg/L na (Big water flea) iple "Substantially similar mixtures".
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA	icity to cri mation EC50 tts 13900 mg A database OL:	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul	mg/L na (Big water flea) iple "Substantially similar mixtures".
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA 1-BUTOXY-2-PROPAN EC50 (48h) > 1	icity to cri mation EC50 tts 13900 mg A database OL: 1000 mg/L	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul	mg/L na (Big water flea) ple "Substantially similar mixtures". bstances»)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA 1-BUTOXY-2-PROPAN EC50 (48h) > 1	icity to cri mation EC50 tts 13900 mg A database OL: 1000 mg/L	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul	mg/L na (Big water flea) ple "Substantially similar mixtures". bstances»)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA 1-BUTOXY-2-PROPAN EC50 (48h) > 1 (Source: ECHA OCTYLSULFATE:	icity to cri mation EC50 tts 13900 mg A database OL: 1000 mg/L A database	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul	mg/L na (Big water flea) iple "Substantially similar mixtures". bstances»)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA 1-BUTOXY-2-PROPAN EC50 (48h) > 1 (Source: ECHA OCTYLSULFATE: EC50 (48h) > 1	icity to cri mation EC50 tts 13900 mg A database OL: 1000 mg/L; 100 mg/L;	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul	mg/L na (Big water flea) iple "Substantially similar mixtures". bstances») bstances»)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA 1-BUTOXY-2-PROPAN EC50 (48h) > 1 (Source: ECHA OCTYLSULFATE: EC50 (48h) > 1	icity to cri mation EC50 tts 13900 mg A database OL: 1000 mg/L; 100 mg/L;	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul e «Registered sul NOEC (48 h) 100	mg/L na (Big water flea) iple "Substantially similar mixtures". bstances») bstances»)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA 1-BUTOXY-2-PROPAN EC50 (48h) > 1 (Source: ECHA OCTYLSULFATE: EC50 (48h) > 1 (Source: ECHA	icity to cr mation EC50 its 13900 mg A database OL: 1000 mg/L; A database	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul e «Registered sul NOEC (48 h) 100	mg/L na (Big water flea) iple "Substantially similar mixtures". bstances») bstances»)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA 1-BUTOXY-2-PROPAN EC50 (48h) > 1 (Source: ECHA OCTYLSULFATE: EC50 (48h) > 1 (Source: ECHA	icity to cr mation EC50 its 13900 mg A database <i>OL:</i> 1000 mg/L; A database 100 mg/L; I000 mg/L;	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul e «Registered sul NOEC (48 h) 100	mg/L na (Big water flea) iple "Substantially similar mixtures". bstances») bstances») 0 mg/L bstances»)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA 1-BUTOXY-2-PROPAN EC50 (48h) > 1 (Source: ECHA OCTYLSULFATE: EC50 (48h) > 1 (Source: ECHA	icity to cr mation EC50 its 13900 mg/L A database OL: 1000 mg/L; A database 100 mg/L; A database	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul NOEC (48 h) 100 e «Registered sul	mg/L na (Big water flea) iple "Substantially similar mixtures". bstances») bstances») 0 mg/L bstances»)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA 1-BUTOXY-2-PROPAN EC50 (48h) > 1 (Source: ECHA OCTYLSULFATE: EC50 (48h) > 1 (Source: ECHA DECYLSULFATE: EC50 (48h) > 1 (Source: ECHA	icity to cri mation EC50 its 13900 mg/L A database OL: 1000 mg/L; A database 100 mg/L; A database 100 mg/L A database DE:	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul NOEC (48 h) 100 e «Registered sul	mg/L na (Big water flea) iple "Substantially similar mixtures". bstances») bstances») 0 mg/L bstances»)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA 1-BUTOXY-2-PROPAN EC50 (48h) > 1 (Source: ECHA OCTYLSULFATE: EC50 (48h) > 1 (Source: ECHA DECYLSULFATE: EC50 (48h) > 1 (Source: ECHA ALKYLPOLYGLYCOSII EC50 (48h) > 1	icity to cri mation EC50 its 13900 mg A database <i>OL:</i> 1000 mg/L; A database 100 mg/L; A database 100 mg/L I00 mg/L I00 mg/L I00 mg/L	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul NOEC (48 h) 100 e «Registered sul NOEC (48 h) 100 e «Registered sul	mg/L na (Big water flea) iple "Substantially similar mixtures". bstances») bstances») 0 mg/L bstances»)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA 1-BUTOXY-2-PROPAN EC50 (48h) > 1 (Source: ECHA OCTYLSULFATE: EC50 (48h) > 1 (Source: ECHA DECYLSULFATE: EC50 (48h) > 1 (Source: ECHA ALKYLPOLYGLYCOSII EC50 (48h) > 1	icity to cri mation EC50 its 13900 mg/L A database OL: 1000 mg/L A database 100 mg/L A database DE: 100 mg/L A database	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul NOEC (48 h) 100 e «Registered sul	mg/L na (Big water flea) iple "Substantially similar mixtures". bstances») bstances») 0 mg/L bstances»)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA 1-BUTOXY-2-PROPAN EC50 (48h) > 1 (Source: ECHA OCTYLSULFATE: EC50 (48h) > 1 (Source: ECHA DECYLSULFATE: EC50 (48h) > 1 (Source: ECHA ALKYLPOLYGLYCOSII EC50 (48h) > 1 (Source: ECHA	icity to cri mation EC50 its 13900 mg/L A database OL: 1000 mg/L; A database 100 mg/L; A database DE: 100 mg/L A database T:	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul NOEC (48 h) 100 e «Registered sul NOEC (48 h) 100 e «Registered sul	mg/L na (Big water flea) iple "Substantially similar mixtures". bstances») bstances») 0 mg/L bstances»)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA 1-BUTOXY-2-PROPAN EC50 (48h) > 1 (Source: ECHA OCTYLSULFATE: EC50 (48h) > 1 (Source: ECHA DECYLSULFATE: EC50 (48h) > 1 (Source: ECHA ALKYLPOLYGLYCOS/II EC50 (48h) > 1 (Source: ECHA ALKYLPOLYGLYCOS/II EC50 (48h) > 1 (Source: ECHA FLUOROSURFACTAN LC (48h) 470 n	icity to cri mation EC50 Its 13900 mg A database OL: 1000 mg/L A database DE: 100 mg/L A database DE: 100 mg/L A database T: ng/L	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul NOEC (48 h) 100 e «Registered sul e «Registered sul e «Registered sul	mg/L na (Big water flea) iple "Substantially similar mixtures". bstances») bstances») 0 mg/L bstances»)
Acute (short-term) toxi Preparation related infor Effective dose Exposure time Species Method Information on ingredien 1,2-ETHANDIOL: EC50 (48h) > (Source: ECHA 1-BUTOXY-2-PROPAN EC50 (48h) > 1 (Source: ECHA OCTYLSULFATE: EC50 (48h) > 1 (Source: ECHA DECYLSULFATE: EC50 (48h) > 1 (Source: ECHA ALKYLPOLYGLYCOSII EC50 (48h) > 1 (Source: ECHA	icity to cri mation EC50 its 13900 mg A database OL: 1000 mg/L A database DE: 100 mg/L A database DE: 100 mg/L A database T: ng/L y Data Shu	ustacea : > 10 < 100* : 48 h : Daphnia magr : Bridging princi /L e «Registered sul NOEC (48 h) 100 e «Registered sul NOEC (48 h) 100 e «Registered sul e «Registered sul e «Registered sul e «Registered sul	mg/L ha (Big water flea) iple "Substantially similar mixtures". bstances») bstances») 0 mg/L bstances») bstances»)



(Source: Safety Data Sheet)

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)/(EU) 2020/878 STHAMEX[®]-AFFF 1% F-15 #4144

S

V-09 Print date: 28.10.21 Page 17 of 23

Dr. STHAMER HAMBURG

Preparation related i Effective dose	EC50	: > 10 < 100*	ma/l			
Exposure time	EC30	: 72 h	mg/L			
Species		: Scenedesmu	e cubenicatue			
Method			s subspicatus iple "Substantial	ly cimilar mixtu	~~~"	
Information on ingre	dianta	. Бладінд ріпа	apie Substantia	iy Similar mixtu	165.	
1,2-ETHANDIOL:						
·	> 6500 ma/l	L; NOEC (96h) 4	79 ma/l			
		se «Registered su				
1-BUTOXY-2-PROF						
EC50 (96h) > 1000 mg/l	L; NOEC (96h) 5	69 mg/L			
(Source: E	CHA databas	se «Registered su	ubstances»)			
OCTYLSULFATE:						
		; NOEC (72h) 19				
`	CHA databas	se «Registered su	ubstances»)			
DECYLSULFATE:						
		NOEC (72h) 0,95				
(Source: E ALKYLPOLYGLYC		se «Registered su	Ibstances»)			
		; NOEC (72h) 6,2	15 ma/l			
•		se «Registered su	-			
FLUOROSURFACT						
No data av						
(Source: S		nant)				
		ieel)				
			OUS SUBSTAN	CES:		
INGREDIENTS NO	T CLASSIFIE			CES:		
INGREDIENTS NO No classific	T CLASSIFIE	ED AS HAZARDO		CES:		
INGREDIENTS NO No classifio (Source: S	T CLASSIFIE cation in the a afety Data Sh	ED AS HAZARDO		CES:		
INGREDIENTS NO No classific (Source: S Effects in sewage	T CLASSIFIE cation in the a afety Data Sh plants	ED AS HAZARDO		CES:		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related	T CLASSIFIE cation in the a afety Data Sh plants information	ED AS HAZARDC above-mentioned neet)	hazard class			
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related Analytical method	T CLASSIFIE cation in the a afety Data Sh plants information : Respirator	ED AS HAZARDC above-mentioned neet) y inhibition of mu	hazard class	sludge.	1000	
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L	T CLASSIFIE cation in the a afety Data Sh plants information : Respirator ► Con	ED AS HAZARDC above-mentioned neet) y inhibition of mu acentration	hazard class nicipal activated : 100%	sludge. Dilution	: > 1000*	
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related Analytical method 1000* mg/L 100000* mg/L	T CLASSIFIE cation in the a afety Data Sh plants information : Respirator ▶ Con ▶ Con	ED AS HAZARDC above-mentioned neet) y inhibition of mu iccentration iccentration	hazard class nicipal activated : 100% : 1%	sludge. Dilution Dilution	: > 1000* : > 10*	
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related Analytical method 1000* mg/L 100000* mg/L Method	T CLASSIFIE cation in the a afety Data Sh plants information : Respirator ▶ Con È Con : Bridging pr	ED AS HAZARDC above-mentioned neet) y inhibition of mu acentration	hazard class nicipal activated : 100% : 1%	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 100000* mg/L Method Information on ingre	T CLASSIFIE cation in the a afety Data Sh plants information : Respirator ▶ Con È Con : Bridging pr	ED AS HAZARDC above-mentioned neet) y inhibition of mu iccentration iccentration	hazard class nicipal activated : 100% : 1%	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 10000* mg/L Method Information on ingree 1,2-ETHANDIOL:	T CLASSIFIE cation in the a afety Data Sh plants information : Respirator ▶ Con ▶ Con : Bridging pr dients	ED AS HAZARDC above-mentioned neet) y inhibition of mu acentration acentration rinciple "Substant	hazard class nicipal activated : 100% : 1%	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 100000* mg/L 100000* mg/L Method Information on ingre 1,2-ETHANDIOL: NOEC (0,5	T CLASSIFIE cation in the a afety Data Sh plants information : Respirator ▶ Con ▶ Con : Bridging pu dients	ED AS HAZARDC above-mentioned neet) y inhibition of mu acentration acentration rinciple "Substant	hazard class nicipal activated : 100% : 1% ially similar mixt	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage p Preparation related i Analytical method 1000* mg/L 100000* mg/L Method Information on ingree 1,2-ETHANDIOL: NOEC (0,5 (Source: E	T CLASSIFIE cation in the a afety Data Sh plants information : Respirator ▶ Con ▶ Con \$ Bridging pi dients ch) > 1995 mg CHA databas	ED AS HAZARDC above-mentioned neet) y inhibition of mu acentration acentration rinciple "Substant	hazard class nicipal activated : 100% : 1% ially similar mixt	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 100000* mg/L 100000* mg/L Method Information on ingree 1,2-ETHANDIOL: NOEC (0,5 (Source: E 1-BUTOXY-2-PROF	T CLASSIFIE cation in the a afety Data Sh plants information : Respirator ▶ Con ▶ Con Bridging pl dients cHA databas PANOL:	ED AS HAZARDC above-mentioned neet) y inhibition of mu acentration rinciple "Substant g/L se «Registered su	hazard class nicipal activated : 100% : 1% ially similar mixt	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 10000* mg/L 100000* mg/L Method Information on ingre 1,2-ETHANDIOL: NOEC (0,5 (Source: E 1-BUTOXY-2-PROF EC50 (3h)	T CLASSIFIE cation in the a afety Data Sh plants information : Respirator ▶ Con ▶ Con ▶ Con \$ Bridging pr dients sh) > 1995 mg CHA databas 2ANOL: > 1000 mg/L	ED AS HAZARDC above-mentioned neet) y inhibition of mu iccentration iccentration rinciple "Substant g/L se «Registered su	hazard class nicipal activated : 100% : 1% ially similar mixt ubstances»)	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 10000* mg/L 100000* mg/L Method Information on ingre 1,2-ETHANDIOL: NOEC (0,5 (Source: E 1-BUTOXY-2-PROF EC50 (3h) (Source: E	T CLASSIFIE cation in the a afety Data Sh plants information : Respirator ▶ Con ▶ Con ▶ Con \$ Bridging pr dients sh) > 1995 mg CHA databas 2ANOL: > 1000 mg/L	ED AS HAZARDC above-mentioned neet) y inhibition of mu acentration rinciple "Substant g/L se «Registered su	hazard class nicipal activated : 100% : 1% ially similar mixt ubstances»)	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 10000* mg/L 10000* mg/L Method Information on ingre 1,2-ETHANDIOL: NOEC (0,5 (Source: E 1-BUTOXY-2-PROF EC50 (3h) (Source: E OCTYLSULFATE:	T CLASSIFIE cation in the a afety Data Sh plants information ► Respirator ► Con ► Con ► Con ► Con ► Bridging pr dients CHA databas PANOL: > 1000 mg/L CHA databas	ED AS HAZARDC above-mentioned neet) y inhibition of mu iccentration iccentration rinciple "Substant g/L se «Registered su	hazard class nicipal activated : 100% : 1% ially similar mixt ubstances»)	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 10000* mg/L 100000* mg/L Method Information on ingre 1,2-ETHANDIOL: NOEC (0,5 (Source: E 1-BUTOXY-2-PROF EC50 (3h) (Source: E OCTYLSULFATE: EC50 (3h)	T CLASSIFIE cation in the a afety Data St plants information Respirator ► Con Eridging pr dients CHA databass PANOL: > 1000 mg/L CHA databass 135 mg/L	ED AS HAZARDC above-mentioned neet) y inhibition of mu iccentration incentration rinciple "Substant g/L se «Registered su	hazard class nicipal activated : 100% : 1% ially similar mixt ubstances»)	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 10000* mg/L 100000* mg/L 100000* mg/L Method Information on ingre 1,2-ETHANDIOL: NOEC (0,5 (Source: E 1-BUTOXY-2-PROF EC50 (3h) (Source: E C50 (3h) (Source: E	T CLASSIFIE cation in the a afety Data St plants information Respirator ► Con Eridging pr dients CHA databass PANOL: > 1000 mg/L CHA databass 135 mg/L	ED AS HAZARDC above-mentioned neet) y inhibition of mu iccentration iccentration rinciple "Substant g/L se «Registered su	hazard class nicipal activated : 100% : 1% ially similar mixt ubstances»)	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 10000* mg/L 100000* mg/L 100000* mg/L Method Information on ingre 1,2-ETHANDIOL: NOEC (0,5 (Source: E 1-BUTOXY-2-PROF EC50 (3h) (Source: E C50 (3h) (Source: E	T CLASSIFIE cation in the a afety Data Sh plants information	ED AS HAZARDC above-mentioned neet) y inhibition of mu iccentration incentration rinciple "Substant g/L se «Registered su	hazard class nicipal activated : 100% : 1% ially similar mixt ubstances»)	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 100000* mg/L 100000* mg/L 100000* mg/L 100000* mg/L Method Information on ingre 1,2-ETHANDIOL: NOEC (0,5 (Source: E 1-BUTOXY-2-PROF EC50 (3h) (Source: E DECYLSULFATE: EC50 (3h)	T CLASSIFIE cation in the a afety Data Sh plants information : Respirator ▶ Con È Bridging pl dients cHA databas PANOL: > 1000 mg/L CHA databas 135 mg/L CHA databas	ED AS HAZARDC above-mentioned neet) y inhibition of mu iccentration incentration rinciple "Substant g/L se «Registered su	hazard class nicipal activated : 100% : 1% ially similar mixt ubstances») ubstances»)	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 10000* mg/L Method Information on ingre 1,2-ETHANDIOL: NOEC (0,5 (Source: E 1-BUTOXY-2-PROF EC50 (3h) (Source: E DECYLSULFATE: EC50 (3h) (Source: E DECYLSULFATE: EC50 (3h) (Source: E	T CLASSIFIE cation in the a afety Data Sh plants information : Respirator ▶ Con ▶ Con ■ Con ■ Con = Bridging pr dients sh) > 1995 mg CHA databas PANOL: > 1000 mg/L CHA databas 135 mg/L CHA databas 0S/DE:	ED AS HAZARDC above-mentioned neet) y inhibition of mu acentration nicentration rinciple "Substant g/L se «Registered su se «Registered su	hazard class nicipal activated : 100% : 1% ially similar mixt ubstances») ubstances»)	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 10000* mg/L 100000* mg/L Method Information on ingre 1,2-ETHANDIOL: NOEC (0,5 (Source: E 1-BUTOXY-2-PROF EC50 (3h) (Source: E DECYLSULFATE: EC50 (3h) (Source: E DECYLSULFATE: EC50 (3h) (Source: E ALKYLPOLYGLYC) EC50 (6h)	T CLASSIFIE cation in the a afety Data Sh plants information : Respirator ▶ Con ▶ Con : Bridging pr dients cHA databas PANOL: > 1000 mg/L CHA databas 135 mg/L CHA databas OSIDE: > 560 mg/L	ED AS HAZARDC above-mentioned neet) y inhibition of mu iccentration incentration rinciple "Substant g/L se «Registered su se «Registered su se «Registered su se «Registered su	hazard class nicipal activated : 100% : 1% ially similar mixt ubstances») ubstances») ubstances»)	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 10000* mg/L Method Information on ingre 1,2-ETHANDIOL: NOEC (0,5 (Source: E 1-BUTOXY-2-PROF EC50 (3h) (Source: E DECYLSULFATE: EC50 (3h) (Source: E DECYLSULFATE: EC50 (3h) (Source: E ALKYLPOLYGLYC EC50 (6h) (Source: E	T CLASSIFIE cation in the a afety Data Sh plants information Respirator ► Con ► Con CHA databas ► Solo mg/L CHA databas	ED AS HAZARDC above-mentioned neet) y inhibition of mu acentration nicentration rinciple "Substant g/L se «Registered su se «Registered su	hazard class nicipal activated : 100% : 1% ially similar mixt ubstances») ubstances») ubstances»)	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 10000* mg/L 10000* mg/L Method Information on ingre 1,2-ETHANDIOL: NOEC (0,5 (Source: E 1-BUTOXY-2-PROF EC50 (3h) (Source: E DECYLSULFATE: EC50 (3h) (Source: E DECYLSULFATE: EC50 (3h) (Source: E ALKYLPOLYGLYCE EC50 (6h) (Source: E	T CLASSIFIE cation in the a afety Data SI plants information Respirator ► Con Endging pr dients CHA databas PANOL: > 1000 mg/L CHA databas 135 mg/L CHA databas 135 mg/L CHA databas OS/DE: > 560 mg/L CHA databas CHA databas	ED AS HAZARDC above-mentioned neet) y inhibition of mu iccentration incentration rinciple "Substant g/L se «Registered su se «Registered su se «Registered su se «Registered su	hazard class nicipal activated : 100% : 1% ially similar mixt ubstances») ubstances») ubstances»)	sludge. Dilution Dilution		
INGREDIENTS NO No classific (Source: S Effects in sewage Preparation related i Analytical method 1000* mg/L 10000* mg/L 10000* mg/L Method Information on ingre 1,2-ETHANDIOL: NOEC (0,5 (Source: E 1-BUTOXY-2-PROF EC50 (3h) (Source: E DECYLSULFATE: EC50 (3h) (Source: E DECYLSULFATE: EC50 (3h) (Source: E ALKYLPOLYGLYCC EC50 (6h) (Source: E FLUOROSURFACT No data av	T CLASSIFIE cation in the a afety Data SI plants information Respirator ► Con Endging pr dients CHA databas PANOL: > 1000 mg/L CHA databas 135 mg/L CHA databas 135 mg/L CHA databas OS/DE: > 560 mg/L CHA databas CHA databas	ED ÁS HAZARDC above-mentioned neet) y inhibition of mu icentration incentration rinciple "Substant g/L se «Registered su se «Registered su se «Registered su se «Registered su	hazard class nicipal activated : 100% : 1% ially similar mixt ubstances») ubstances») ubstances»)	sludge. Dilution Dilution		





V-09 Print date: 28.10.21 Page 18 of 23

		FIED AS HAZARDOUS SUBSTANCES:
	No classification in th (Source: Safety Data	e above-mentioned hazard class
	(Source: Salety Data	
	The product contains fluorosur	factants that are not completely biodegradable.
	Some of the components are p	poorly biodegradable.
	Remark	
	Observe local regulations cond	cerning effluent treatment
	Special pre-treatments are neo	
	* The statement is derived from	n products of similar structure or composition.
42.2	Porsistones and day	
12.2	Persistence and deg Biodegradation	gradability
	Preparation related information	
	Readily biodegradable (accord	
	Additional information	: The product contains fluorosurfactants that are not completely biodegradable.
	Degradation rate	: >70%*
	Test duration	: 28 d
	Analytical method	: BOD (% of COD).
	Method	: Bridging principle "Substantially similar mixtures".
	Туре	: Aerobic biological treatment
	Information on ingredients	Ĵ
	1,2-ETHANDIOL:	
	> 90% (10d) OECD 3	01A
		e (according to OECD criteria).
		pase «Registered substances»)
	1-BUTOXY-2-PROPANOL:	
	90% (10d) OECD 30	
		e (according to OECD criteria). base «Registered substances»)
	OCTYLSULFATE:	ase «Negislered subslances»)
	93,5% (29d) OECD 3	01 B
		e (according to OECD criteria).
		pase «Registered substances»)
	DECYLSULFATE:	
	92% (30d) OECD 30	
		e (according to OECD criteria).
		pase «Registered substances»)
	ALKYLPOLYGLYCOSIDE: 70% (28d) OECD 30	1 Δ
		e (according to OECD criteria).
		pase «Registered substances»)
	FLUOROSURFACTANT:	
	No data available	
		e above-mentioned hazard class
	(Source: Safety Data	
		FIED AS HAZARDOUS SUBSTANCES:
	> 70% (28d) OECD 3	
	(Source: Safety Data	e (according to OECD criteria). Sheet)
	0	
	Chemical oyxgen demand (C	
	< 1500000* mg*O2/L ► (Concentration : 100% Method DIN EN 38409-H41-1



V-09

5 d

5 d



Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)/(EU) 2020/878 Print date: 28.10.21 STHAMEX[®]-AFFF 1% F-15 #4144 Page 19 of 23 <15000* mg*O2/L Concentration : 1% Method DIN EN 38409-H41-1 **Biochemical oxygen demand** < 600000* mg*O2/L Concentration : 100% Method DIN EN 1899-1 Test duration < 6000* mg*O2/L Concentration : 1% Method DIN EN 1899-1 Test duration **BOD5/COD** ratio 40% * The statement is derived from products of similar structure or composition. 12.3 Bioaccumulative potential Preparation related information There are no data available on the mixture itself. Information on ingredients 1,2-ETHANDIOL: log Kow -1,36 No indication of bioaccumulation potential. (Source: ECHA database «Registered substances») 1-BUTOXY-2-PROPANOL: BCF 3.16 No indication of bioaccumulation potential. (Source: ECHA database «Registered substances») OCTYLSULFATE: $\log Pow < -2.31$ No indication of bioaccumulation potential. (Source: ECHA database «Registered substances») DECYLSULFATE: log Pow 1.72 No indication of bioaccumulation potential. (Source: ECHA database «Registered substances») ALKYLPOLYGLYCOSIDE: log Kow < 1,77 No indication of bioaccumulation potential. (Source: ECHA database «Registered substances») FLUOROSURFACTANT: No data available No information available. No classification in the above-mentioned hazard class (Source: Safety Data Sheet) INGREDIENTS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES: No classification in the above-mentioned hazard class No information available. No classification in the above-mentioned hazard class (Source: Safety Data Sheet) 12.4 Mobility in soil If product enters soil, it will be mobile and may contaminate groundwater. 12.5 Results of PBT and vPvB assessment Preparation related information There are no data available on the mixture itself. Information on ingredients

1.2-ETHANDIOL: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. (Source: Safety Data Sheet) 1-BUTOXY-2-PROPANOL:





Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)/(EU) 2020/878

STHAMEX[®]-AFFF 1% F-15 #4144

V-09 Print date: 28.10.21 Page 20 of 23

	This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. (Source: Safety Data Sheet)
	OCTYLSULFATE:
	This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. (Source: Safety Data Sheet)
	DECYLSULFATE:
	This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. (Source: Safety Data Sheet)
	ALKYLPOLYGLYCOSIDE:
	This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
	(Source: Safety Data Sheet) FLUOROSURFACTANT:
	This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
	(Source: Safety Data Sheet)
	INGREDIENTS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES:
	The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
	(Source: Safety Data Sheet)
12.6	Endocrine disrupting properties
	Preparation related information
	There are no data available on the mixture itself.
	Information on ingredients
	1,2-ETHANDIOL:
	This substance does not have endocrine disrupting properties with respect to humans.
	(Source: Safety Data Sheet)
	1-BUTOXY-2-PROPANOL: This substance does not have endearing disrupting properties with respect to humans
	This substance does not have endocrine disrupting properties with respect to humans. (Source: Safety Data Sheet)
	OCTYLSULFATE:
	This substance does not have endocrine disrupting properties with respect to humans.
	(Source: Safety Data Sheet)
	DECYLSULFATE:
	This substance does not have endocrine disrupting properties with respect to humans.
	(Source: Safety Data Sheet)
	ALKYLPOLYGLYCOSIDE:
	This substance does not have endocrine disrupting properties with respect to humans. (Source: Safety Data Sheet)
	FLUOROSURFACTANT:
	This substance does not have endocrine disrupting properties with respect to humans.
	(Source: Safety Data Sheet)
	INGREDIENTS NOT CLASSIFIED AS HAZARDOUS SUBSTANCES:
	This substance does not have endocrine disrupting properties with respect to humans.
	(Source: Safety Data Sheet)
12.7	Other adverse effects
	The product contains fluorosurfactants that are not completely biodegradable.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Dispose of waste according to applicable legislation.

Waste codes/waste designations according to EWC/AVV Waste code product





Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)/(EU) 2020/878

STHAMEX[®]-AFFF 1% F-15 #4144

V-09 Print date: 28.10.21 Page 21 of 23

10 VASIES NULUTHERWISE SPECIFIED IN THE LIST	16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
--	----	--

- 1603 off-specification batches and unused products
- 160305* organic wastes containing dangerous substances

Waste code packaging

- 15 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
- **1501** packaging (including separately collected municipal packaging waste)
- 150110* packaging containing residues of or contaminated by dangerous substances

Remark

Delivery to an approved waste disposal company.

Send to a hazardous waste incinerator facility under observation of official regulations.

SECTION 14: Transport information

14.1 UN number or ID number

none

14.2 UN proper shipping name

not applicable

14.3 Transport hazard class(es)

Land transport (ADR/RID)

No dangerous good in sense of these transport regulations.

Inland waterway craft (ADN)

No dangerous good in sense of these transport regulations.

Sea transport (IMDG)

No dangerous good in sense of these transport regulations.

Air transport (ICAO-TI / IATA-DGR)

No dangerous good in sense of these transport regulations.

14.4	Packing group
	not applicable
14.5	Environmental hazards
	none

Marine pollutant : No

14.6 Special precautions for user

none

14.7 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU legislation

Regulation (EC) No. 2037/2000 concerning materials, which cause damage to the ozone layer. not applicable





V-09 Print date: 28.10.21 Page 22 of 23

not applicable	
Directive 96/5 not applicable	9/EC (PCB-guideline)
•	C) No. 648/2004 (Detergents regulation) contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on
	ccording to 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline). c compounds (VOC) content in percent by weight:: max. 25
Regulation (E	C) No. 842/2006 on certain fluorinated greenhouse gases
•	C) No 2019/1021 [POP/PFOS-Regulation]
The product fu	Ifills all requirements and limit values of this EU regulation.
Regulation (E	C) No 2020/784 [PFOA-Regulation]
The product fu	Ifills all requirements and limit values of this EU regulation.
Regulation (E	C) No 2021/1297 [C9-C14-PFCA-Regulation]
The product fu	Ifills all requirements and limit values of this EU regulation.
National re	gulations
Störfallverord	Inung
This product is	not classified according to StörfallVO.
Water hazard	class
slightly hazard	ous to water (WGK 1)
Self-classificat	ion according to AwSV (mixture).

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

The product described in the Safety Data Sheet may only be used for its intended purpose. For exercises please observe the recommendations of the technical committee of BMU/LAMA. The details in this safety data sheet are based on today's stand of our knowledge and is applicable to the product with regard to appropriate safety precautions. They do not represent any guarantee of the properties of the product and do not establish any legal relationship.

Please refer to our internet website for more information: www.sthamer.com

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information





V-09 Print date: 28.10.21 Page 23 of 23

on this safety data sheet is not necessarily valid for the new made-up material.

Classification for the 1% application solution of STHAMEX-AFFF 1% F-15 #4144:

The information in this safety data sheet only applies to the unchanged product in the delivery condition. An application solution prepared therefrom by diluting it with water as recommended usually has significantly fewer hazardous features due to the dilution principle and can even be unclassified. See also the environmental data sheet provided by us.

Relevant R-, H- and EUH-phrases (Number and full text)

- H302 Harmful if swallowed or if inhaled.
- H315 Causes skin and eye irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H373.8 May cause damage to kidneys through prolonged or repeated exposure if swallowed.