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

MOUSSOL®-FF 3/6 F-5 #7942

no PFAS added

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

1.1 Product identifier

MOUSSOL®-FF 3/6 F-5 #7942

UFI: 1VYP-W0HT-U000-CRJH

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 safety 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 Göttingen	+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).

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]
Eye Irrit. 2 H319 - STOT RE 2 H373

2.2 Label elements

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

Signal word	**WARNING**	
Hazard statements	H319	Causes serious eye irritation.
	H373.8	May cause damage to kidneys through prolonged or repeated exposure if swallowed.
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	IF 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.

Classification procedure On basis of test data./Experimental data

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.

2-(2-BUTOXYETHOXY)ETHANOL:

This substance does not have endocrine disrupting properties with respect to humans.

TRIETHANOLAMMONIUM-LAURYLSULFATE:

This substance does not have endocrine disrupting properties with respect to humans.

ALKYLAMIDOBETAINE:

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.

2-(2-BUTOXYETHOXY)ETHANOL:

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

TRIETHANOLAMMONIUM-LAURYLSULFATE:

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

ALKYLAMIDOBETAINE:

This substance does not meet the PBT/vPvB criteria of 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!
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

3.2 Mixtures

1,2-ETHANDIOL
CAS No.: 107-21-1
EC No.: 203-473-3
REACH No.: 01-2119456816-28-XXXX
Concentration: 10 - 15%
Classification according to Regulation (EC) No 1272/2008 [CLP]: GHS07-GHS08; Acute Tox. 4-STOT RE 2; H302-H373.8

2-(2-BUTOXYETHOXY)ETHANOL
CAS No.: 112-34-5
EC No.: 203-961-6
REACH No.: 01-2119475104-44-XXXX
Concentration: 5 - 10%
Classification according to Regulation (EC) No 1272/2008 [CLP]: GHS07; Eye Irrit. 2; H319

TRIETHANOLAMMONIUM-LAURYLSULFATE
CAS No.: 85665-45-8
EC No.: 288-134-8
REACH No.: 01-2119966908-16-XXXX
Concentration: 5 - 10%
Classification according to Regulation (EC) No 1272/2008 [CLP]: GHS05-GHS07; Acute Tox. 4-Skin Irrit. 2-Eye Irrit. 2-STOT SE 3-Aquatic Chronic 3; H302-H315-H318-H332-H335-H412

ALKYLAMIDOBETAINE
CAS No.: 147170-44-3
EC No.: 263-058-8
REACH No.: 01-2119552480-44-XXXX
Concentration: 1 - 5%
Classification according to Regulation (EC) No 1272/2008 [CLP]: GHS05; Eye Dam. 1-Aquatic Chronic 3; H318-H412

WATER
CAS No.: 7732-18-5
Concentration: 60 - 79%
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.

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

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.

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.
- 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)

Substance name: 2-(2-BUTOXYETHOXY)ETHANOL
CAS No.: 112-34-5

REACH No.: 01-2119475104-44-XXXX

United Kingdom

Long-term occupational exposure limit value: 10 ppm; Limit value type (country of origin): TWA (EN)
short-term occupational exposure limit value: 15 ppm; Limit value type (country of origin): STEL (EN)

European Union

Long-term occupational exposure limit value: 10 ppm; Limit value type (country of origin): TWA (EC)
short-term occupational exposure limit value: 15 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: 15 ppm; Limit value type (country of origin): Peak (DE)

Ireland

Long-term occupational exposure limit value: 10 ppm; Limit value type (country of origin): TWA (IE)
short-term occupational exposure limit value: 15 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 skin care products after work.

Eye/face protection

Suitable eye protection
- Eye glasses with side protection
- goggles
- Face protection shield

Recommended eye protection articles
- EN 166

Hand protection

Suitable gloves type
- Gloves with long cuffs

Suitable material
- 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

9.1 Information on basic physical and chemical properties

a)	Physical state			:	Liquid	
b)	Colour			:	colourless / yellow	
c)	Odour			:	Glycol, Ether, Surfactant	
d)	Melting point/freezing point			:	-5°C	EN 1568:2018
e)	Boiling point or initial boiling point and boiling range			:	> 100°C	DIN 51751
f)	Flammability			:	not applicable	
g)	Lower and upper explosion limit/flammability limit			:	No data available	
h)	Flash point			:	No flash point up to 100 °C.	
i)	Ignition temperature in °C			:	not applicable	
j)	Decomposition temperature			:	No data available	
k)	pH	at °C	20	:	6,5 - 8,5	DIN 19268
l)	Viscosity	at °C	20	:	< 800(400) mPa*s @ 75(375) 1/s	DIN 53019 structure viscous
		at °C	-5	:	< 1500(750) mPa*s @ 75(375) 1/s	DIN 53019 structure viscous
m)	Solubility			:	Water: completely miscible	OECD 105
n)	Partition coefficient n-octanol/water (log value)			:	not applicable	
o)	Vapour pressure			:	No data available	
p)	Density and/or relative density	at °C	20	:	1,020 - 1,060 g/ml	DIN 12791
q)	Relative vapour density			:	No data available	
r)	particle characteristics			:	not applicable	

9.2 Other information

Information with regard to physical hazard classes

a)	Explosives	:	not applicable
b)	Explosives	:	not applicable
c)	Aerosols	:	not applicable
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
l)	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
p)	Corrosive to metals	:	See section 7 of the safety data sheet.
q)	Desensitised explosives	:	not applicable

Other 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**	:	~ 6100 µS/cm
h)	**Corrosiveness**	:	Skin corrosion/irritation: none Serious eye damage/irritation: irritant.
i)	**gas group**	:	not applicable
j)	**Redox potential**	:	not applicable
k)	**radical formation potential**	:	not applicable
l)	**photocatalytic properties**	:	not applicable

Additional hazards

Breathing is not possible whilst submerged in the foam. Take care when spraying people!

SECTION 10: Stability and reactivity

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.

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

SECTION 11: Toxicological information

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

a) Acute toxicity

Acute oral toxicity

Preparation related information

LD50	> 2000 mg/kg	The acute oral toxicity is corresponding to GHS-category 5.
Species	Rat	
Method	On basis of test data.: OECD 420	

Information on ingredients

1,2-ETHANDIOL:

LD50 (7d) 2310 mg/kg ==>
Harmful if swallowed.
(Source: ECHA database «Registered substances»)

2-(2-BUTOXYETHOXY)ETHANOL:

LD50 (14d) 5530 mg/kg ==>
The acute oral toxicity is corresponding to GHS-category 5.

(Source: ECHA database «Registered substances»)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

LD50 (14d) > 1650 mg/kg ==>

Harmful if swallowed.

(Source: ECHA database «Registered substances»)

ALKYLAMIDOBETAINE:

LD50 (14d) 2235 mg/kg ==>

The acute oral toxicity is corresponding to GHS-category 5.

(Source: ECHA database «Registered substances»)

Acute dermal toxicity

Preparation related information

There are no data available on the mixture itself.

Information on ingredients

1,2-ETHANDIOL:

LD50 (14d) > 3500 mg/kg ==>

The acute dermal toxicity is corresponding to GHS-category 5.

(Source: ECHA database «Registered substances»)

2-(2-BUTOXYETHOXY)ETHANOL:

LD50 (1d) 2764 mg/kg ==>

The acute dermal toxicity is corresponding to GHS-category 5.

(Source: ECHA database «Registered substances»)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

LD50 (14d) > 2000 mg/kg ==>

The acute dermal toxicity is corresponding to GHS-category 5.

(Source: ECHA database «Registered substances»)

ALKYLAMIDOBETAINE:

LD50 (14d) > 2000 mg/kg ==>

The acute dermal toxicity is corresponding to GHS-category 5.

(Source: ECHA database «Registered substances»)

Acute inhalation toxicity

Preparation related information

There are no data available on the mixture itself.

Information on ingredients

1,2-ETHANDIOL:

LC50 (6h) > 2,5 mg/L ==>

The acute inhalation toxicity related to vapours is corresponding to GHS-category 5.

(Source: ECHA database «Registered substances»)

2-(2-BUTOXYETHOXY)ETHANOL:

NOEC (2h) 29 ppm ==>

The acute inhalation toxicity related to vapours is corresponding to GHS-category 5.

(Source: ECHA database «Registered substances»)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

No data available

Harmful if inhaled.

(Source: Safety Data Sheet)

ALKYLAMIDOBETAINE:

No data available

No information available. No classification in the above-mentioned hazard class

(Source: Safety Data Sheet)

b) Skin corrosion/irritation

Preparation related information

non-irritant.

Species Albino rabbit

Method On basis of test data.: OECD 404

Information on ingredients

1,2-ETHANDIOL:
non-irritant.
(Source: Safety Data Sheet)
2-(2-BUTOXYETHOXY)ETHANOL:
non-irritant.
(Source: Safety Data Sheet)
TRIETHANOLAMMONIUM-LAURYLSULFATE:
Causes skin irritation.
(Source: Safety Data Sheet)
ALKYLAMIDOBETAINE:
non-irritant.
(Source: Safety Data Sheet)

c) Serious eye damage/irritation

Preparation related information

Causes eye irritation.

Species	Albino rabbit
Method	On basis of test data.: OECD 404

Information on ingredients

1,2-ETHANDIOL:
non-irritant.
(Source: Safety Data Sheet)
2-(2-BUTOXYETHOXY)ETHANOL:
Causes serious eye irritation.
(Source: Safety Data Sheet)
TRIETHANOLAMMONIUM-LAURYLSULFATE:
Causes serious eye damage.
(Source: Safety Data Sheet)
ALKYLAMIDOBETAINE:
Causes serious eye damage.
(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)
2-(2-BUTOXYETHOXY)ETHANOL:
not sensitising.
(Source: Safety Data Sheet)
TRIETHANOLAMMONIUM-LAURYLSULFATE:
not sensitising.
(Source: Safety Data Sheet)
ALKYLAMIDOBETAINE:
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)
2-(2-BUTOXYETHOXY)ETHANOL:
No indications of human germ cell mutagenicity exist.

(Source: Safety Data Sheet)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

No indications of human germ cell mutagenicity exist.
(Source: Safety Data Sheet)

ALKYLAMIDOBETAINE:

No indications of human germ cell mutagenicity exist.
(Source: Safety Data Sheet)

f) Carcinogenicity

Preparation related information

There are no data available on the mixture itself.

Information on ingredients

1,2-ETHANDIOL:

No indication of human carcinogenicity.
(Source: Safety Data Sheet)

2-(2-BUTOXYETHOXY)ETHANOL:

No indication of human carcinogenicity.
(Source: Safety Data Sheet)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

No indication of human carcinogenicity.
(Source: Safety Data Sheet)

ALKYLAMIDOBETAINE:

No indication of human carcinogenicity.
(Source: Safety Data Sheet)

g) Reproductive toxicity

Preparation related information

There are no data available on the mixture itself.

Information on ingredients

1,2-ETHANDIOL:

No indications of human reproductive toxicity exist.
(Source: Safety Data Sheet)

2-(2-BUTOXYETHOXY)ETHANOL:

No indications of human reproductive toxicity exist.
(Source: Safety Data Sheet)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

No indications of human reproductive toxicity exist.
(Source: Safety Data Sheet)

ALKYLAMIDOBETAINE:

No indications of human reproductive toxicity exist.
(Source: Safety Data Sheet)

h) STOT-single exposure

Preparation related information

There are no data available on the mixture itself.

Information on ingredients

1,2-ETHANDIOL:

No known symptoms to date.
(Source: Safety Data Sheet)

2-(2-BUTOXYETHOXY)ETHANOL:

No known symptoms to date.
(Source: Safety Data Sheet)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

No known symptoms to date.
(Source: Safety Data Sheet)

ALKYLAMIDOBETAINE:

No known symptoms to date.
(Source: Safety Data Sheet)

i) STOT-repeated exposure

Preparation related information

There are no data available on the mixture itself.

Information on ingredients

1,2-ETHANDIOL:

May cause damage to kidneys through prolonged or repeated exposure if swallowed.
(Source: Safety Data Sheet)

2-(2-BUTOXYETHOXY)ETHANOL:

No known symptoms to date.
(Source: Safety Data Sheet)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

No known symptoms to date.
(Source: Safety Data Sheet)

ALKYLAMIDOBETAINE:

No known symptoms to date.
(Source: Safety Data Sheet)

j) Aspiration hazard

Preparation related information

There are no data available on the mixture itself.

Information on ingredients

1,2-ETHANDIOL:

No known symptoms to date.
(Source: Safety Data Sheet)

2-(2-BUTOXYETHOXY)ETHANOL:

No known symptoms to date.
(Source: Safety Data Sheet)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

No known symptoms to date.
(Source: Safety Data Sheet)

ALKYLAMIDOBETAINE:

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)

2-(2-BUTOXYETHOXY)ETHANOL:

This substance does not have endocrine disrupting properties with respect to humans.
(Source: Safety Data Sheet)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

This substance does not have endocrine disrupting properties with respect to humans.
(Source: Safety Data Sheet)

ALKYLAMIDOBETAINE:

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

Acute (short-term) fish toxicity

Preparation related information

Effective dose	LC50	: ~ 240	mg/L
Exposure time		: 96 h	
Species		: Leuciscus idus (golden orfe)	
Method		: On basis of test data.: OECD 203	

Information on ingredients

1,2-ETHANDIOL:

LC50 (96h) > 72860 mg/L

(Source: ECHA database «Registered substances»)

2-(2-BUTOXYETHOXY)ETHANOL:

LC50 (96hr) 1300mg/L

(Source: ECHA database «Registered substances»)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

LC50 (96h) 5,3 mg/L

(Source: ECHA database «Registered substances»)

ALKYLAMIDOBETAINE:

LC50 (96h) 1,11 mg/L

(Source: ECHA database «Registered substances»)

Acute (short-term) toxicity to aquatic invertebrates

Preparation related information

Effective dose	EC50	: ~ 210	mg/L
Exposure time		: 48 h	
Species		: Daphnia magna (Big water flea)	
Method		: On basis of test data.: OECD 202	

Information on ingredients

1,2-ETHANDIOL:

EC50 (48h) > 13900 mg/L

(Source: ECHA database «Registered substances»)

2-(2-BUTOXYETHOXY)ETHANOL:

EC50 (48hr) > 1101 mg/L

(Source: ECHA database «Registered substances»)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

EC50 (48h) 4,2 mg/L

(Source: ECHA database «Registered substances»)

ALKYLAMIDOBETAINE:

EC50 (48h) 1,9 mg/L

(Source: ECHA database «Registered substances»)

Acute (short-term) toxicity to algae and cyanobacteria

Preparation related information

Effective dose	EC50	: ~ 210	mg/L
Exposure time		: 72 h	
Species		: Scenedesmus subspicatus	
Method		: On basis of test data.: OECD 201	

Information on ingredients

1,2-ETHANDIOL:

EC50 (96h) > 6500 mg/L; NOEC (96h) 479 mg/L

(Source: ECHA database «Registered substances»)

2-(2-BUTOXYETHOXY)ETHANOL:

EC50 (72h) 1 101 mg/L

(Source: ECHA database «Registered substances»)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

EC50 (72h) 11 mg/L; NOEC (72h) 3 mg/L

(Source: ECHA database «Registered substances»)

ALKYLAMIDOBETAINE:

EC50 (72h) 1,5 mg/L; NOEC (72h) 0,3 mg/L

(Source: ECHA database «Registered substances»)

Effects in sewage plants

Preparation related information

Analytical method : Respiratory inhibition of municipal activated sludge.

500	mg/L	► Concentration	: 100%	Dilution	: > 2000
16600	mg/L	► Concentration	: 3%	Dilution	: > 60

Method : On basis of test data.: DIN 38412/part 3 (TTC)

Information on ingredients

1,2-ETHANDIOL:

NOEC (0,5h) > 1995 mg/L

(Source: ECHA database «Registered substances»)

2-(2-BUTOXYETHOXY)ETHANOL:

NOEC (0,5h) 1995 mg/L

(Source: ECHA database «Registered substances»)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

EC50 (3h) 135 mg/L

(Source: ECHA database «Registered substances»)

ALKYLAMIDOBETAINE:

NOEC (16h) 3000 mg/L

(Source: ECHA database «Registered substances»)

Technically correct releases of minimal concentrations to adapted biological sewage plants, will not disturb the biodegradability of activated sludge.

The product may lead to foaming in sewage plants.

Remark

Observe local regulations concerning effluent treatment.

Special pre-treatments are necessary.

12.2 Persistence and degradability

Biodegradation

Preparation related information

Readily biodegradable (according to OECD criteria).

Degradation rate : ~ 99%

Test duration : 28 d

Analytical method : BOD (% of COD).

Method : On basis of test data.: OECD 301F

Type : Aerobic biological treatment

Information on ingredients

1,2-ETHANDIOL:

> 90% (10d) OECD 301A

Readily biodegradable (according to OECD criteria).

(Source: ECHA database «Registered substances»)

2-(2-BUTOXYETHOXY)ETHANOL:

92% (28d) OECD 301 E

Readily biodegradable (according to OECD criteria).

(Source: ECHA database «Registered substances»)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

92% (30d) OECD 301 D

Readily biodegradable (according to OECD criteria).

(Source: ECHA database «Registered substances»)

ALKYLAMIDOBETAINE:

95% (28d) OECD 201 C

Readily biodegradable (according to OECD criteria).

(Source: ECHA database «Registered substances»)

Chemical oyxgen demand (COD)

~ 488000	mg *O2/L	▶	Concentration	: 100%	Method	DIN EN 38409-H41-1		
~ 14640	mg *O2/L	▶	Concentration	: 3%	Method	DIN EN 38409-H41-1		

Biochemical oxygen demand

~ 170000	mg *O2/L	▶	Concentration	: 100%	Method	DIN EN 1899-1	Test duration	5 d
~ 5100	mg *O2/L	▶	Concentration	: 3%	Method	DIN EN 1899-1	Test duration	5 d

BOD5/COD ratio

35%

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»)

2-(2-BUTOXYETHOXY)ETHANOL:

log Kow < 3
No indication of bioaccumulation potential.
(Source: ECHA database «Registered substances»)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

log Pow < -0,76
No indication of bioaccumulation potential.
(Source: ECHA database «Registered substances»)

ALKYLAMIDOBETAINE:

BCF < 71
No indication of bioaccumulation potential.
(Source: ECHA database «Registered substances»)

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)

2-(2-BUTOXYETHOXY)ETHANOL:

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
(Source: Safety Data Sheet)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
(Source: Safety Data Sheet)

ALKYLAMIDOBETAINE:

This substance does not meet the PBT/vPvB criteria of 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)

2-(2-BUTOXYETHOXY)ETHANOL:

This substance does not have endocrine disrupting properties with respect to humans.
(Source: Safety Data Sheet)

TRIETHANOLAMMONIUM-LAURYLSULFATE:

This substance does not have endocrine disrupting properties with respect to humans.
(Source: Safety Data Sheet)

ALKYLAMIDOBETAINE:

This substance does not have endocrine disrupting properties with respect to humans.
(Source: Safety Data Sheet)

12.7 Other adverse effects

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

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

Regulation (EU) No. 649/2012 of the European parliament and of the council concerning the export and import of dangerous chemicals
not applicable

Directive 96/59/EC (PCB-guideline)
not applicable

Regulation (EC) No. 648/2004 [Detergents regulation]
The surfactant contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.

Information according to 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline).
Volatile organic compounds (VOC) content in percent by weight:: max. 10

Regulation (EC) No. 842/2006 on certain fluorinated greenhouse gases
not applicable

Regulation (EC) No 2019/1021 [POP/PFOS-Regulation]
The product is manufactured without the intended addition of organofluorine compounds for the purpose of increasing performance and therefore does not contain any amount of organofluorine substances beyond the regional ubiquitous background pollution (e.g. in the drinking water used for production).

Regulation (EC) No 2020/784 [PFOA-Regulation]
The product is manufactured without the intended addition of organofluorine compounds for the purpose of increasing performance and therefore does not contain any amount of organofluorine substances beyond the regional ubiquitous background pollution (e.g. in the drinking water used for production).

Regulation (EC) No 2021/1297 [C9-C14-PFCA-Regulation]
The product is manufactured without the intended addition of organofluorine compounds for the purpose of increasing performance and therefore does not contain any amount of organofluorine substances beyond the regional ubiquitous background pollution (e.g. in the drinking water used for production).

National regulations

Störfallverordnung (12. BImschV)
This product is not classified according to StörfallV.

Water hazard class
slightly hazardous to water (WGK 1)

Self-classification according to AwSV (mixture).

Annex Chemikalien-Verbotsverordnung (ChemVerbotsV)
not applicable

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

Classification for the 3%/6% application solution of MOUSSOL-FF 3/6 F-5 #7942:
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.

Full text of Hazard- and EU Hazard-statements

H302	Harmful if swallowed or if inhaled.
H315	Causes skin and eye irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H373.8	May cause damage to kidneys through prolonged or repeated exposure if swallowed.
H412	Harmful to aquatic life with long lasting effects.

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