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

1.1 Product identifier
BIO-RUST F

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses

Sectors of use [SU]
Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Industrial uses
Products Category [PC]
PC-TEC-31 - Metal surface treatment products (Excludes primers for construction materials, functional paints or coatings, and products that permanently bind with the metal surface.)

1.3 Details of the supplier of the safety data sheet
Supplier
Bio-Circle Surface Technology GmbH
Street : Berensweg 200
Postal code/City : 33334 Gütersloh
Telephone : +49 5241 9443 0
Telefax : +49 5241 9443 44
Information contact : labor@bio-circle.de

1.4 Emergency telephone number
+49 5241 9443 51 during normal office hours
(Monday to Thursday from 8 am to 4 pm and Friday from 8 am to 3 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [CLP]
None

2.2 Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP]
Special rules for supplemental label elements for certain mixtures
EUH210 Safety data sheet available on request.

2.3 Other hazards
None

SECTION 3: Composition/information on ingredients

3.2 Mixtures
Hazardous ingredients
ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; REACH No. : 01-0000016977-53-XXXX ; EC No. : 423-270-5; CAS No. : 164462-16-2
Weight fraction : ≥ 5 - < 10 %
Classification 1272/2008 [CLP] : Met. Corr. 1 ; H290

FORMIC ACID ; REACH No. : 01-2119491174-37-XXXX ; EC No. : 200-579-1; CAS No. : 64-18-6
Weight fraction : ≥ 0,1 - < 0,5 %
Classification 1272/2008 [CLP] : Flam. Liq. 3 ; H226 Met. Corr. 1 ; H290 Acute Tox. 3 ; H331 Skin Corr. 1A ; H314 Eye Dam. 1 ; H318 Acute Tox. 4 ; H302 EUH071

Substance with a common (EC) occupational exposure limit value.

Specific Conc. Limits : Skin Corr. 1A ; H314: C ≥ 90 % • Eye Dam. 1 ; H318: C ≥ 10 % • Skin Corr. 1B ; H314: C ≥ 10 % • Skin Corr. 1C ; H314: C ≥ 10 % • Eye Irrit. 2 ; H319: C ≥ 2 % • Skin Irrit. 2 ; H315: C ≥ 2 %

Further ingredients

POLYETHYLENE GLYKOLS 200 - 400 ; REACH No. : 01-2119958801-32-XXXX ; EC No. : 500-038-2; CAS No. : 25322-68-3

Weight fraction : ≥ 1 - < 5 %

Additional information

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

When in doubt or if symptoms are observed, get medical advice. Never give anything by mouth to an unconscious person or a person with cramps.

Following inhalation

Remove casualty to fresh air and keep warm and at rest.

In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Rub greasy ointment into the skin.

After eye contact

Protect uninjured eye. 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

Rinse mouth thoroughly with water. Let 1 glass of water be drunken in little sips (dilution effect). Do NOT induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Extinguishing powder Carbon dioxide (CO2) Sand Nitrogen Extinguishing blanket

Unsuitable extinguishing media

Full water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

In case of fire may be liberated: Carbon monoxide , Carbon dioxide (CO2)

5.3 Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Special danger of slipping by leaking/spilling product. Use personal protection equipment.

6.2 Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

6.3 Methods and material for containment and cleaning up

Clear spills immediately. Wipe up with absorbent material (eg. cloth, fleece). Wash with plenty of water. Treat the recovered material as prescribed in the section on waste disposal.

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

Keep container tightly closed.

7.2 Conditions for safe storage, including any incompatibilities

Keep/Store only in original container. Protect against : Frost .

Hints on joint storage

Storage class (TRGS 510) : 12

7.3 Specific end use(s)

Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

POLYETHYLENE GLYKOLS 200 - 400 ; CAS No. : 25322-68-3

Limit value type (country of origin) :	TRGS 900 (D)
Parameter :	E: inhalable fraction
Limit value :	200 mg/m³
Peak limitation :	2(II)
Remark :	Y
Version :	23.06.2022

FORMIC ACID ; CAS No. : 64-18-6

Limit value type (country of origin) :	TRGS 900 (D)
Limit value :	5 ppm / 9,5 mg/m³
Peak limitation :	2(I)
Remark :	Y
Version :	23.06.2022
Limit value type (country of origin) :	TWA (EC)
Limit value :	5 ppm / 9 mg/m³
Version :	20.06.2019

DNEL-/PNEC-values

DNEL/DMEL

ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2

Limit value type :	DNEL Consumer (local)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	2 mg/m³
Limit value type :	DNEL Consumer (local)
Exposure route :	Dermal
Exposure frequency :	Short-term
Limit value :	400 mg/cm²
Limit value type :	DNEL Consumer (local and systemic)
Exposure route :	Inhalation

Exposure frequency :	Short-term
Limit value :	20 mg/m³
Limit value type :	DNEL Consumer (systemic)
Exposure route :	Oral
Exposure frequency :	Short-term
Limit value :	85 mg/kg bw/day
Limit value type :	DNEL Consumer (systemic)
Exposure route :	Oral
Exposure frequency :	Long-term
Limit value :	17 mg/kg bw/day
Limit value type :	DNEL Consumer (systemic)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	20 mg/m³
Limit value type :	DNEL Consumer (systemic)
Exposure route :	Dermal
Exposure frequency :	Long-term
Limit value :	25 mg/kg bw/day
Limit value type :	DNEL Consumer (systemic)
Exposure route :	Dermal
Exposure frequency :	Short-term
Limit value :	400 mg/kg bw/day
Limit value type :	DNEL worker (local)
Exposure route :	Dermal
Exposure frequency :	Short-term
Limit value :	2000 mg/cm²
Limit value type :	DNEL worker (local)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	4 mg/m³
Limit value type :	DNEL worker (local and systemic)
Exposure route :	Inhalation
Exposure frequency :	Short-term
Limit value :	40 mg/m³
Limit value type :	DNEL worker (systemic)
Exposure route :	Dermal
Exposure frequency :	Long-term
Limit value :	170 mg/kg bw/day
Limit value type :	DNEL worker (systemic)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	40 mg/m³
Limit value type :	DNEL worker (systemic)
Exposure route :	Dermal
Exposure frequency :	Short-term
Limit value :	2000 mg/kg bw/day

POLYETHYLENE GLYKOLS 200 - 400 ; CAS No. : 25322-68-3

Limit value type :	DNEL Consumer (systemic)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	7,14 mg/m³
Limit value type :	DNEL Consumer (systemic)
Exposure route :	Dermal
Exposure frequency :	Long-term
Limit value :	40 mg/kg bw/day
Limit value type :	DNEL Consumer (systemic)

Exposure route : Oral
Exposure frequency : Long-term
Limit value : 40 mg/kg bw/day
Limit value type : DNEL worker (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 40,2 mg/m³
Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 112 mg/kg bw/day

FORMIC ACID ; CAS No. : 64-18-6
Limit value type : DNEL Consumer (local and systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 3 mg/m³
Limit value type : DNEL worker (local and systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 9,5 mg/m³

PNEC

ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2
Limit value type : PNEC (Soil)
Limit value : 2,5 mg/kg dw

POLYETHYLENE GLYKOLS 200 - 400 ; CAS No. : 25322-68-3
Limit value type : PNEC (Aquatic, freshwater)
Limit value : 273 mg/l
Limit value type : PNEC (Aquatic, intermittent release)
Limit value : 1 mg/l
Limit value type : PNEC (Aquatic, marine water)
Limit value : 27,3 mg/l
Limit value type : PNEC (Sediment, freshwater)
Limit value : 1030 mg/kg dw
Limit value type : PNEC (Sediment, marine water)
Limit value : 103 mg/kg dw
Limit value type : PNEC (Soil)
Limit value : 46,4 mg/kg soil dw

FORMIC ACID ; CAS No. : 64-18-6
Limit value type : PNEC (Aquatic, freshwater)
Limit value : 2 mg/l
Limit value type : PNEC (Aquatic, intermittent release)
Limit value : 1 mg/l
Limit value type : PNEC (Aquatic, marine water)
Limit value : 0,2 mg/l
Limit value type : PNEC (Sediment, freshwater)
Limit value : 13,4 mg/kg dw
Limit value type : PNEC (Sediment, marine water)
Limit value : 1,34 mg/kg dw
Limit value type : PNEC (Soil)
Limit value : 1,5 mg/kg soil dw
Limit value type : PNEC (Sewage treatment plant)
Limit value : 7,2 mg/l

8.2 Exposure controls

Personal protection equipment

Eye/face protection

Wear suitable safety goggles in case of splash.

Suitable eye protection

EN 166.

Skin protection

Hand protection

Suitable gloves type : EN 374.

Suitable material : NBR (Nitrile rubber)

Breakthrough time : 480 min.

Thickness of the glove material : 0.4 mm

Remark : The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection

Usually no personal respirative protection necessary.

General information

Do not put any product-impregnated cleaning rags into your trouser pockets. When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes. P362+P364 - Take off contaminated clothing and wash it before reuse. P264 - Wash hands thoroughly after handling.

8.3 Additional information

No tests have been performed. Selection made for preparations according to the best available knowledge and information on ingredients. In the case of preparations the resistance of glove materials cannot be calculated in advance so it has to be tested before use.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid

Colour : colourless

Odour

weak , acidic

Safety characteristics

Melting point/freezing point :	(1013 hPa)	approx.	-2	°C	
Initial boiling point and boiling range :	(1013 hPa)	approx.	100	°C	
Flash point :			not applicable		DIN EN ISO 13736
Auto-ignition temperature :			none		
Flammability :			non-flammable		
Lower explosion limit :			not applicable		
Upper explosion limit :			not applicable		
Vapour pressure :	(50 °C)		not determined		
Density :	(20 °C)		1,048	g/cm^3	
Solvent separation test :	(20 °C)		not applicable		
Water solubility :	(20 °C)		completely miscible		

pH :	(20 °C)	6,5	
Relative vapour density :	(20 °C)	not determined	
Maximum VOC content (EC) :		0,4	Weight-%
Maximum VOC content (Switzerland) :		1,3	Weight-%
Taxable VOC content (Switzerland) :		0,9	Weight-%

9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is considered to be non-reactive under normal use conditions.

10.2 Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

No known hazardous decomposition products.
Decomposition products in case of fire: see section 5.

SECTION 11: Toxicological information

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

Acute toxicity

Acute oral toxicity

Parameter :	ATEmix
Exposure route :	Oral
Effective dose :	> 2000 mg/kg
Parameter :	LD50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 4000 mg/kg
Parameter :	LD50 (POLYETHYLENE GLYKOLS 200 - 400 ; CAS No. : 25322-68-3)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 10000 mg/kg
Parameter :	LD50 (FORMIC ACID ; CAS No. : 64-18-6)
Exposure route :	Oral
Species :	Rat
Effective dose :	730 mg/kg
Method :	OECD 401

Acute dermal toxicity

Parameter :	ATEmix
Exposure route :	Dermal
Effective dose :	> 2000 mg/kg
Parameter :	LD50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)

Exposure route :	Dermal
Species :	Rat
Effective dose :	> 4000 mg/kg
Method :	OECD 402
Parameter :	LD50 (POLYETHYLENE GLYKOLS 200 - 400 ; CAS No. : 25322-68-3)
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	> 20000 mg/kg
Exposure time :	6 h
Parameter :	LD50 (FORMIC ACID ; CAS No. : 64-18-6)
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 2000 mg/kg
Method :	OECD 402

Acute inhalation toxicity

Parameter :	ATEmix
Exposure route :	Inhalation
Effective dose :	> 20 mg/l
Parameter :	LC50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Exposure route :	Inhalation
Species :	Rat
Effective dose :	> 5 mg/l
Parameter :	LC50 (POLYETHYLENE GLYKOLS 200 - 400 ; CAS No. : 25322-68-3)
Exposure route :	Inhalation
Species :	Rat
Effective dose :	> 2,5 mg/l
Exposure time :	6 h
Parameter :	LC50 (FORMIC ACID ; CAS No. : 64-18-6)
Exposure route :	Inhalation (vapour)
Species :	Rat
Effective dose :	7,85 mg/l
Exposure time :	4 h
Method :	OECD 403

Corrosion

Skin corrosion/irritation

Parameter :	Skin corrosion/irritation (FORMIC ACID ; CAS No. : 64-18-6)
Result :	Causes severe burns

Assessment/classification

Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Parameter :	Serious eye damage/eye irritation (FORMIC ACID ; CAS No. : 64-18-6)
Result :	Causes serious eye damage

Assessment/classification

Based on available data, the classification criteria are not met.

Irritation to respiratory tract

Parameter :	Irritation to respiratory tract (FORMIC ACID ; CAS No. : 64-18-6)
Result :	Corrosive

Assessment/classification

Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Skin sensitisation

No further relevant information available.

Sensitisation to the respiratory tract

No further relevant information available.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

No further relevant information available.

Germ cell mutagenicity

No further relevant information available.

Reproductive toxicity

No further relevant information available.

STOT-single exposure

No further relevant information available.

STOT-repeated exposure

No further relevant information available.

Aspiration hazard

No further relevant information available.

11.2 Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Toxicokinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

Other adverse effects

Has degreasing effect on the skin. Frequently or prolonged contact with skin may cause dermal irritation.

Additional information

Preparation not tested. The statement is derived from the properties of the single components.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

Acute (short-term) fish toxicity

Parameter :	LC50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Species :	Danio rerio (zebrafish)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	> 110 mg/l
Exposure time :	96 h
Method :	Regulation (EC) No. 440/2008, Annex C.1
Parameter :	LC50 (POLYETHYLENE GLYKOLS 200 - 400 ; CAS No. : 25322-68-3)
Species :	Poecilia reticulata (Guppy)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	> 100 mg/l
Exposure time :	96 h
Method :	OECD 203
Parameter :	LC50 (FORMIC ACID ; CAS No. : 64-18-6)
Species :	Danio rerio (zebrafish)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	130 mg/l
Exposure time :	96 h
Method :	OECD 203

Chronic (long-term) fish toxicity

Parameter :	NOEC (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. :

	164462-16-2)
Species :	Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter :	Chronic (long-term) fish toxicity
Effective dose :	= 100 mg/l
Exposure time :	28 D
Method :	OECD 204

Acute (short-term) toxicity to crustacea

Parameter :	EC50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) toxicity to crustacea
Effective dose :	> 100 mg/l
Exposure time :	48 h
Method :	Regulation (EC) No. 440/2008, Annex C.2
Parameter :	EC50 (POLYETHYLENE GLYKOLS 200 - 400 ; CAS No. : 25322-68-3)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) daphnia toxicity
Effective dose :	1000 mg/l
Exposure time :	48 h
Parameter :	EC50 (FORMIC ACID ; CAS No. : 64-18-6)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) toxicity to crustacea
Effective dose :	365 mg/l
Exposure time :	48 h
Method :	OECD 202
Parameter :	NOEC (FORMIC ACID ; CAS No. : 64-18-6)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) toxicity to crustacea
Effective dose :	180 mg/l
Exposure time :	48 h
Method :	OECD 202

Acute (short-term) toxicity to algae and cyanobacteria

Parameter :	EC50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Species :	Scenedesmus subspicatus
Evaluation parameter :	Acute (short-term) toxicity to algae and cyanobacteria
Effective dose :	> 200 mg/l
Exposure time :	72 h
Parameter :	EC50 (FORMIC ACID ; CAS No. : 64-18-6)
Species :	Pseudokirchneriella subcapitata
Evaluation parameter :	Acute (short-term) toxicity to algae and cyanobacteria
Effective dose :	1240 mg/l
Exposure time :	72 h
Method :	OECD 201

Chronic (long-term) toxicity to aquatic algae and cyanobacteria

Parameter :	NOEC (POLYETHYLENE GLYKOLS 200 - 400 ; CAS No. : 25322-68-3)
Species :	Pseudokirchneriella subcapitata
Evaluation parameter :	Acute (short-term) algae toxicity
Effective dose :	56,02036 mg/l
Exposure time :	72 h
Method :	OECD 201

Toxicity to microorganisms

Parameter :	EC50 (FORMIC ACID ; CAS No. : 64-18-6)
Species :	Pseudomonas putida
Effective dose :	46,7 mg/l
Exposure time :	17 h

12.2 Persistence and degradability

Abiotic degradation

Abiotic degradation (Air)

Parameter :	Half-life time (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Degradation rate :	4,8 h
Method :	Calculated
Parameter :	Half-life time (FORMIC ACID ; CAS No. : 64-18-6)
Degradation rate :	31 D
Method :	Calculated

Biodegradation

Parameter :	BOD (% of ThOD) (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Inoculum :	Degree of elimination
Evaluation parameter :	Aerobic
Degradation rate :	> 80 - 90 %
Test duration :	28 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301F
Parameter :	DOC reduction (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Inoculum :	Degree of elimination
Evaluation parameter :	Aerobic
Degradation rate :	> 90 - 100 %
Test duration :	28 D
Method :	OECD 301F
Parameter :	Biodegradation (POLYETHYLENE GLYKOLS 200 - 400 ; CAS No. : 25322-68-3)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	74,9 %
Test duration :	28 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Parameter :	DOC reduction (FORMIC ACID ; CAS No. : 64-18-6)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	92 %
Test duration :	28 D
Method :	OECD 301D

12.3 Bioaccumulative potential

Parameter :	Bioconcentration factor (BCF) (POLYETHYLENE GLYKOLS 200 - 400 ; CAS No. : 25322-68-3)
Value :	3,162 L/kg
Parameter :	Partition coefficient n-octanol/water (log value) (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Value :	-4
	25 °C
Parameter :	Partition coefficient n-octanol/water (log value) (POLYETHYLENE GLYKOLS 200 - 400 ; CAS No. : 25322-68-3)
Value :	0,2
	30 °C
Parameter :	Partition coefficient n-octanol/water (log value) (FORMIC ACID ; CAS No. : 64-18-6)
Value :	-2,3 - -1,9

No indication of bioaccumulation potential.

12.4 Mobility in soil

Adsorption

Parameter :	Henry's Law Constant (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Effective dose :	0 Pa.m^3/mol
Exposure time :	25 °C
Parameter :	Henry's Law Constant (FORMIC ACID ; CAS No. : 64-18-6)
Effective dose :	0,019 Pa.m^3/mol
Exposure time :	25 °C

12.5 Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6 Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Directive 2008/98/EC (Waste Framework Directive)

Before intended use

Waste codes/waste designations according to EWC/AVV

20 01 30 (Detergents other than those mentioned in 20 01 29)

Other disposal recommendations

Dispose of waste according to applicable legislation. Dispose of contents/container to an appropriate recycling or disposal facility. Contaminated packages must be completely emptied and can be re-used following proper cleaning (Water (with cleaning agent)). Handle contaminated packages in the same way as the substance itself.

13.2 Additional information

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

14.1 UN number or ID number

No dangerous good in sense of these transport regulations.

14.2 UN proper shipping name

No dangerous good in sense of these transport regulations.

14.3 Transport hazard class(es)

No dangerous good in sense of these transport regulations.

14.4 Packing group

No dangerous good in sense of these transport regulations.

14.5 Environmental hazards

No dangerous good in sense of these transport regulations.

14.6 Special precautions for user

None

14.7 Maritime transport in bulk according to IMO instruments

not relevant

SECTION 15: Regulatory information

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

EU legislation

Authorisations and/or restrictions on use

Restrictions on use

Use restriction according to REACH annex XVII, no. : 40, 55, 75

Other regulations (EU)

Regulation (EU) No 528/2012 (Biocidal products)

This product is a with biocidal products treated article.
Preservative (2-PHENOXYETHAN-1-OL ; 2-BUTYL-2,3-DIHYDRO-1,2-BENZOTHIAZOL-3-ONE ; BIS(3-AMINOPROPYL)(DODECYL)AMINE)

Labelling for contents according to regulation (EC) No. 648/2004

< 5 % phosphonates
< 5 % phosphates
Preservative (2-PHENOXYETHAN-1-OL ; 2-BUTYL-2,3-DIHYDRO-1,2-BENZOTHIAZOL-3-ONE ; BIS(3-AMINOPROPYL)(DODECYL)AMINE)

National regulations

Technische Anleitung zur Reinhaltung der Luft (TA-Luft)

Weight fraction (Number 5.2.5. I) : < 5 %

Water hazard class

Classification according to AwSV - Class : 1 (Slightly hazardous to water)

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1 Indication of changes

01. Relevant identified uses of the substance or mixture and uses advised against · 08. DNEL-/PNEC-values · 09. Information on basic physical and chemical properties · 11. Toxicological information · 12. Ecological information · 15. Other regulations (EU)

16.2 Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (Europäisches Übereinkommen über die Beförderung gefährlicher Güter auf der Straße)
AOX: adsorbierbare organisch gebundene Halogene
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen
CAS: Chemical Abstracts Service (Unterabteilung der American Chemical Society)
CLP: Verordnung (EG) Nr. 1272/2008 über die Einstufung, Kennzeichnung und Verpackung von Stoffen und Gemischen (Classification Labelling and Packaging)
EAK / AVV: europäischer Abfallartenkatalog / Abfallverzeichnis-Verordnung
ECHA: Europäische Chemikalienagentur (European Chemicals Agency)
EINECS: : Altstoffverzeichnis (European Inventory of Existing Commercial Chemical Substances)
GHS: Global harmonisiertes System zur Einstufung und Kennzeichnung von Chemikalien (Globally Harmonized System of Classifiaction and Labelling of Chemicals)
IATA: Internationale Luftverkehrs-Vereinigung (International Air Transport Association)
ICAO: Internationale Zivilluftfahrtorganisation (International Civil Aviation Organization)
IMDG: Gefahrgutkennzeichnung für gefährliche Güter im Seeschiffverkehr (International Maritime Code for Dangerous Goods)
RID: Regelung zur internationalen Beförderung gefährlicher Güter im Schienenverkehr (Règlement concernant le transport international ferroviaire de marchandises dangereuses)
TRGS: Technische Regel für den Umgang mit Gefahrstoffen
VbF: Verordnung über brennbare Flüssigkeiten
VOC: flüchtige organische Verbindung (volatile organic compound)
VVEA: Verordnung über die Vermeidung und die Entsorgung von Abfällen
VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe
WGK: Wassergefährdungsklasse

16.3 Key literature references and sources for data

DGUV: GESTIS-Stoffdatenbank
ECHA: Classification And Labelling Inventory

ECHA: Pre-registered Substances
ECHA: Registered Substances
EC_Safety Data Sheet of Suppliers
ESIS: European Chemical Substances Information System
GDL: Gefahrstoffdatenbank der Länder
UBA Rigoletto: Wassergefährdende Stoffe
Regulation (EC) No. 1907/2006 of the European Parliament and of the Council
|-> COMMISSION REGULATION (EU) 2020/878 of 18 June 2020
Regulation (EC) No. 1272/2008 of the European Parliament and of the Council

16.4 Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

16.5 Relevant H- and EUH-phrases (Number and full text)

H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
EUH071	Corrosive to the respiratory tract.

16.6 Training advice

None

16.7 Additional information

None

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.