

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
 Issue date: 1/11/2013 Revision date: 1/16/2024 Supersedes: 3/10/2023 Version: 2.2
 SDS No: 00056-0001

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

1.1. Product identifier

Product form : Mixture
 Product name : Tiutol KF
 UFI : CJ5V-P7U9-800E-89MC

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Disinfectant for haemodialysismonitors

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

B. Braun Avitum AG
 Schwarzenberger Weg 73 - 79
 D-34212 Melsungen
 Germany
 T +49 (0) 5661 / 71-4422
logistics.service@bbraun.com

Distributor

B. Braun Avitum AG
 Schwarzenberger Weg 73 - 79
 D-34212 Melsungen
 Germany
 T +49 (0) 5661 / 71-4422
logistics.service@bbraun.com

E-mail address of competent person responsible for the SDS: sds@gbk-ingelheim.de

1.4. Emergency telephone number

Emergency number : INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Corrosive to metals, Category 1	H290
Skin corrosion/irritation, Category 1	H314
Serious eye damage/eye irritation, Category 1	H318
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

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

Adverse physicochemical, human health and environmental effects

May be corrosive to metals. Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP) :

Signal word (CLP) : Danger

Contains : Sodium hydroxide; sodium hypochlorite, solution 3,9 % Cl active

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- Hazard statements (CLP) : H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.
H410 - Very toxic to aquatic life with long lasting effects.
- Precautionary statements (CLP) : P280 - Wear protective gloves, protective clothing, eye protection, face 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.
P310 - Immediately call a POISON CENTER, a doctor.
P273 - Avoid release to the environment.
P234 - Keep only in original packaging.
P501 - Dispose of contents and container to an approved waste disposal plant.

Labelling according to: exemption for packages of a capacity of 125ml or less

Hazard pictograms (CLP) :



GHS05

GHS09

- Signal word (CLP) : Danger
- Hazardous ingredients : Sodium hydroxide; sodium hypochlorite, solution 3,9 % Cl active
- Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage.
- Precautionary statements (CLP) : P280 - Wear protective gloves, protective clothing, eye protection, face 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.
P310 - Immediately call a POISON CENTER, a doctor.
P501 - Dispose of contents and container to an approved waste disposal plant.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII.

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical characterization : Alkaline concentrate with sodium hypochlorite and sodium hydroxide

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Sodium hydroxide	CAS-No.: 1310-73-2 EC-No.: 215-185-5 EC Index-No.: 011-002-00-6 REACH-no: 01-2119457892-27	< 5	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
sodium hypochlorite, solution 3,9 % Cl active	CAS-No.: 7681-52-9 EC-No.: 231-668-3 EC Index-No.: 017-011-00-1	< 10	Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 EUH031

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Sodium hydroxide	CAS-No.: 1310-73-2 EC-No.: 215-185-5 EC Index-No.: 011-002-00-6 REACH-no: 01-2119457892-27	(0.5 ≤ C < 2) Eye Irrit. 2, H319 (0.5 ≤ C < 2) Skin Irrit. 2, H315 (2 ≤ C < 5) Skin Corr. 1B, H314 (5 ≤ C < 100) Skin Corr. 1A, H314
sodium hypochlorite, solution 3,9 % Cl active	CAS-No.: 7681-52-9 EC-No.: 231-668-3 EC Index-No.: 017-011-00-1	(5 ≤ C ≤ 100) EUH031

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Data of item 4 do partly not refer to the use and the regular employing of the product (in this sense consult package leaflet and expert information), but to liberation of major amounts in case of accidents and irregularities. Take off immediately all contaminated clothing. Show this safety data sheet to the doctor in attendance. Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released. Nitrogen oxides. Sulphur oxides. Chlorine.
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5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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Other information : Cool containers at risk with water spray jet.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Ensure adequate air ventilation. In case of vapour formation use adequate respirator.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe Vapours, spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Do not discharge into drains or the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

Information for personal protective equipment look up section 8. Information for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Avoid contact with skin and eyes.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.
Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Incompatible materials : Metals. Acids.
Information on mixed storage : Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

See Section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

Monitoring methods	
Monitoring methods	A specific exposure sampling method is not available.

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Monitoring methods

Biological monitoring methods	A specific exposure sampling method is not available
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8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Data of item 8 do partly not refer to the use and the regular employing of the product (in this sense consult package leaflet and expert information), but to liberation of major amounts in case of accidents and irregularities.

8.2.2.1. Eye and face protection

Eye protection:

Eyewash bottle with clean water (EN 15154)

Eye protection

Type	Field of application	Characteristics	Standard
Safety glasses with side shields	Liquid splashes may occur		EN 166

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions. Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves

Hand protection

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
protective gloves	Natural rubber	6 (> 480 minutes)	0,6		EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Respiratory protection

Device	Filter type	Condition	Standard
Breathing apparatus with filter	Type B - Inorganic gases (hydrogen sulfide, chlorine, hydrogen cyanide)	In case of inadequate ventilation wear	EN 14387

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8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: light yellow.
Odour	: chlorine.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability (solid, gas)	: Non flammable.
Explosive properties	: Product is not explosive.
Oxidising properties	: Not oxidising.
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: ≈ 13.5 Concentrate
Viscosity, kinematic	: Not available
Solubility	: Miscible.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1.15 – 1.25 g/cm ³ at 20 °C
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

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10.5. Incompatible materials

metals.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

Sodium hydroxide (1310-73-2)

LD50 oral rat	> 2000 mg/kg
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sodium hypochlorite, solution 3,9 % Cl active (7681-52-9)

LD50 dermal rabbit	> 20000 mg/kg bodyweight
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Skin corrosion/irritation : Causes severe skin burns.
pH: ≈ 13.5 Concentrate
Serious eye damage/irritation : Causes serious eye damage.
pH: ≈ 13.5 Concentrate
Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

Sodium hydroxide (1310-73-2)

LC50 fish 1	189 mg/l 96 h, Leuciscus idus (golden orfe)
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sodium hypochlorite, solution 3,9 % Cl active (7681-52-9)	
EC50 Daphnia 1	141 µg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	35 µg/l Test organisms (species): Ceriodaphnia dubia
EC50 72h - Algae [1]	0.0365 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.0183 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Tiutol KF
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions. The waste code/waste name refers to the end product. To be defined by the customer in agreement with appropriate waste disposal company.

European List of Waste (LoW, EC 2000/532) : 07 06 01* - aqueous washing liquids and mother liquors

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3266	UN 3266	UN 3266	UN 3266	UN 3266

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ADR	IMDG	IATA	ADN	RID
14.2. UN proper shipping name				
CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hypochlorite ; Sodium hydroxide)	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hypochlorite ; Sodium hydroxide)	Corrosive liquid, basic, inorganic, n.o.s. (Sodium hypochlorite ; Sodium hydroxide)	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hypochlorite ; Sodium hydroxide)	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hypochlorite ; Sodium hydroxide)
Transport document description				
UN 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hypochlorite ; Sodium hydroxide), 8, II, (E), ENVIRONMENTALLY HAZARDOUS	UN 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hypochlorite ; Sodium hydroxide), 8, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 3266 Corrosive liquid, basic, inorganic, n.o.s. (Sodium hypochlorite ; Sodium hydroxide), 8, II, ENVIRONMENTALLY HAZARDOUS	UN 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hypochlorite ; Sodium hydroxide), 8, II, ENVIRONMENTALLY HAZARDOUS	UN 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hypochlorite ; Sodium hydroxide), 8, II, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
8	8	8	8	8
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR) : C5
 Special provisions (ADR) : 274
 Limited quantities (ADR) : 1I
 Excepted quantities (ADR) : E2
 Packing instructions (ADR) : P001, IBC02
 Mixed packing provisions (ADR) : MP15
 Transport category (ADR) : 2
 Hazard identification number (Kemler No.) : 80
 Orange plates :



Tunnel restriction code (ADR) : E

Transport by sea

Special provisions (IMDG) : 274
 Limited quantities (IMDG) : 1 L
 Excepted quantities (IMDG) : E2
 Packing instructions (IMDG) : P001
 IBC packing instructions (IMDG) : IBC02
 Tank instructions (IMDG) : T11

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Tank special provisions (IMDG) : TP2, TP27
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B
Stowage category (IMDG) : B
Stowage and handling (IMDG) : SW2
Segregation (IMDG) : SGG18, SG35

Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y840
PCA limited quantity max net quantity (IATA) : 0.5L
PCA packing instructions (IATA) : 851
PCA max net quantity (IATA) : 1L
CAO packing instructions (IATA) : 855
CAO max net quantity (IATA) : 30L
Special provisions (IATA) : A3, A803
ERG code (IATA) : 8L

Inland waterway transport

Classification code (ADN) : C5
Special provisions (ADN) : 274
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : C5
Special provisions (RID) : 274
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02
Transport category (RID) : 2
Hazard identification number (RID) : 80

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	sodium hypochlorite, solution 3,9 % Cl active	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	sodium hypochlorite, solution 3,9 % Cl active	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1

REACH Annex XIV (Authorisation List)

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

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REACH Candidate List (SVHC)

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

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Detergent Regulation (648/2004)

Labelling of contents:
Component
< 5 % polycarboxylates Ingredients subject to the labelling obligation according to SCCP: -

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

Seveso Directive (Disaster Risk Reduction)

Seveso III Part I (Categories of dangerous substances)	Qualifying quantity (tonnes)	
	Lower-tier	Upper-tier
E1 Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1	100	200

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

All chapters have been modified since the previous version.

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF	Bioconcentration factor
ATE	Acute Toxicity Estimate
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods

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Abbreviations and acronyms:	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
DOT	Department of Transport
TDG	Transportation of Dangerous Goods
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
GHS	Globally Harmonized System of Classification, Labelling and Packaging of Chemicals
IARC	International Agency for Research on Cancer
vPvB	Very Persistent and Very Bioaccumulative
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
IBC-Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
MARPOL 73/78	MARPOL 73/78: International Convention for the Prevention of Pollution From Ships
ADG	Transport of Australian Dangerous Goods
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
ED	Endocrine disrupting properties

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
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Other information : Data of sections 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities. The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge. The delivery specifications are contained in the corresponding product sheet. This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

Full text of H- and EUH-statements:	
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
EUH031	Contact with acids liberates toxic gas.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Met. Corr. 1	H290	
Skin Corr. 1	H314	On basis of test data
Eye Dam. 1	H318	On basis of test data
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 2	H411	Calculation method

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should therefore not be construed as guaranteeing any specific property of the product.