

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)



Trade name : E-NOX Clean  
Revision date : 03.09.2020  
Print date : 03.09.2020

Version (Revision) : 4.0.1 (4.0.0)

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

**1.1 Product identifier**

E-NOX Clean

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

**Relevant identified uses**

PC 35 - Washing and cleaning products

**1.3 Details of the supplier of the safety data sheet**

**Supplier (manufacturer/importer/only representative/downstream user/distributor)**

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

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

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

Met. Corr. 1 ; H290 - Corrosive to metals : Category 1 ; May be corrosive to metals.

Skin Irrit. 2 ; H315 - Skin corrosion/irritation : Category 2 ; Causes skin irritation.

Eye Dam. 1 ; H318 - Serious eye damage/eye irritation : Category 1 ; Causes serious eye damage.

**2.2 Label elements**

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

**Hazard pictograms**



Corrosion (GHS05)

**Signal word**

Danger

**Hazard components for labelling**

PHOSPHORIC ACID 20 % ; CAS No. : 7664-38-2

**Hazard statements**

H290 May be corrosive to metals.

H318 Causes serious eye damage.

H315 Causes skin irritation.

**Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P310 Immediately call a POISON CENTER/doctor/....

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P302+P352 IF ON SKIN: Wash with plenty of water/....

P362+P364 Take off contaminated clothing and wash it before reuse.

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P390 Absorb spillage to prevent material damage.

## 2.3 Other hazards

None

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous ingredients

PHOSPHORIC ACID ; REACH No. : 01-2119485924-24-XXXX ; EC No. : 231-633-2; CAS No. : 7664-38-2

Weight fraction :  $\geq 10 - < 25 \%$

Classification 1272/2008 [CLP] : Met. Corr. 1 ; H290 Skin Corr. 1B ; H314 Eye Dam. 1 ; H318  
Substance with a common (EC) occupational exposure limit value.

Specific Conc. Limits : Eye Dam. 1 ; H318: C  $\geq 25 \%$  • Skin Corr. 1B ; H314: C  $\geq 25 \%$  • Skin Corr. 1C ;  
H314: C  $\geq 25 \%$  • Eye Irrit. 2 ; H319: C  $\geq 10 \%$  • Skin Irrit. 2 ; H315: C  $\geq 10 \%$

2-BUTOXYETHANOL ; REACH No. : 01-2119475108-36-XXXX ; EC No. : 203-905-0; CAS No. : 111-76-2

Weight fraction :  $\geq 5 - < 10 \%$

Classification 1272/2008 [CLP] : Acute Tox. 4 ; H302 Acute Tox. 4 ; H312 Acute Tox. 4 ; H332 Skin Irrit. 2 ; H315  
Eye Irrit. 2 ; H319  
Substance with a common (EC) occupational exposure limit value.

BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; REACH No. : 01-2119489428-22-XXXX ; EC  
No. : 270-115-0; CAS No. : 68411-30-3

Weight fraction :  $\geq 1 - < 3 \%$

Classification 1272/2008 [CLP] : Eye Dam. 1 ; H318 Acute Tox. 4 ; H302 Skin Irrit. 2 ; H315 Aquatic Chronic 3 ; H412

POTASSIUM CUMENESULFONATE ; REACH No. : 01-2119489427-24-XXXX ; EC No. : 629-764-9; CAS No. : 164524-02-1

Weight fraction :  $\geq 1 - < 5 \%$

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319

SODIUM CUMENESULPHONATE ; REACH No. : 01-2119489411-37-XXXX ; EC No. : 239-854-6; CAS No. : 15763-76-5

Weight fraction :  $\geq 1 - < 5 \%$

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319

#### Additional information

Full text of H- and EUH-phrases: 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

In case of respiratory tract irritation, consult a physician.

#### In case of skin contact

P332+P313 - If skin irritation occurs: Get medical advice/attention. After contact with skin, wash immediately with plenty of water and soap. Rub greasy ointment into the skin.

#### 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. Protect uninjured eye.

#### After 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

Causes skin irritation. Causes serious eye damage.

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#### 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 (CO<sub>2</sub>) 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 (CO<sub>2</sub>) , Phosphorus oxides , Sulphur oxides

#### 5.3 Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Wear full chemical protective clothing.

#### 5.4 Additional information

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings. Move undamaged containers from immediate hazard area if it can be done safely. Do not allow run-off from fire-fighting to enter drains or water courses.

### SECTION 6: Accidental release measures

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

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

#### 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

##### Requirements for storage rooms and vessels

P234 - Keep only in original packaging. P406 - Store in a corrosion resistant/... container with a resistant inner liner.

##### Hints on joint storage

Storage class (TRGS 510) : 8B

#### 7.3 Specific end use(s)

Observe technical data sheet. Observe instructions for use.

### SECTION 8: Exposure controls/personal protection

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## 8.1 Control parameters

### Occupational exposure limit values

PHOSPHORIC ACID ; CAS No. : 7664-38-2

Limit value type (country of origin) : TRGS 900 ( D )  
Parameter : E: inhalable fraction  
Limit value : 2 mg/m<sup>3</sup>  
Peak limitation : 2(I)  
Remark : Y  
Version : 29.03.2019

Limit value type (country of origin) : STEL ( EC )  
Limit value : 2 mg/m<sup>3</sup>  
Version : 20.06.2019

Limit value type (country of origin) : TWA ( EC )  
Limit value : 1 mg/m<sup>3</sup>  
Version : 20.06.2019

2-BUTOXYETHANOL ; CAS No. : 111-76-2

Limit value type (country of origin) : TRGS 900 ( D )  
Limit value : 10 ppm / 49 mg/m<sup>3</sup>  
Peak limitation : 2(II)  
Remark : H,Y  
Version : 29.03.2019

Limit value type (country of origin) : STEL ( EC )  
Limit value : 50 ppm / 246 mg/m<sup>3</sup>  
Remark : Skin  
Version : 20.06.2019

Limit value type (country of origin) : TWA ( EC )  
Limit value : 20 ppm / 98 mg/m<sup>3</sup>  
Remark : Skin  
Version : 20.06.2019

### Biological limit values

2-BUTOXYETHANOL ; CAS No. : 111-76-2

Limit value type (country of origin) : TRGS 903 ( D )  
Parameter : Butoxy acetic acid / Urine (U) / At long term exposure: after several previous shifts  
Limit value : 100 mg/l  
Version : 29.03.2019

Limit value type (country of origin) : TRGS 903 ( D )  
Parameter : Butoxy acetic acid / Urine (U) / End of exposure or end of shift ; At long term exposure: after several previous shifts  
Limit value : 150 mg/g Kr  
Version : 29.03.2019

### DNEL-/PNEC-values

#### DNEL/DMEL

Limit value type : DNEL worker (local) ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Exposure route : Inhalation  
Exposure frequency : Short-term  
Limit value : 246 mg/m<sup>3</sup>

Limit value type : DNEL worker (local) ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 1 mg/m<sup>3</sup>

Limit value type : DNEL worker (local) ( BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3 )  
Exposure route : Inhalation  
Exposure frequency : Long-term

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Limit value : 12 mg/m<sup>3</sup>  
Limit value type : DNEL worker (local) ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )  
Exposure route : Inhalation  
Exposure frequency : Short-term  
Limit value : 2 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1 )  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 53,6 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 98 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3 )  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 12 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5 )  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 53,6 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5 )  
Exposure route : Dermal  
Exposure frequency : Long-term  
Limit value : 7,6 mg/kg  
Limit value type : DNEL worker (systemic) ( BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3 )  
Exposure route : Dermal  
Exposure frequency : Long-term  
Limit value : 170 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Exposure route : Inhalation  
Exposure frequency : Short-term  
Limit value : 663 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic) ( POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1 )  
Exposure route : Dermal  
Exposure frequency : Long-term  
Limit value : 7,6 mg/kg  
Limit value type : DNEL worker (systemic) ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Exposure route : Dermal  
Exposure frequency : Long-term  
Limit value : 75 mg/kg  
Limit value type : DNEL worker (systemic) ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Exposure route : Dermal  
Exposure frequency : Short-term  
Limit value : 89 mg/kg

**PNEC**  
Limit value type : PNEC (Aquatic, freshwater) ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Limit value : 8,8 mg/l  
Limit value type : PNEC (Aquatic, marine water) ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Limit value : 0,88 mg/l  
Limit value type : PNEC (Sediment, freshwater) ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Limit value : 34,6 mg/kg

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Limit value type : PNEC (Soil) ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Limit value : 2,33 mg/kg  
Limit value type : PNEC (Sewage treatment plant) ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Limit value : 463 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



Wear protective gloves in case of longer lasting skin contact.

**Suitable gloves type** : EN 374.  
**Suitable material** : NBR (Nitrile rubber)  
**Breakthrough time (maximum wearing 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



Respiratory protection necessary at: exceeding exposure limit values

##### Suitable respiratory protection apparatus

Combination filtering device (EN 14387)  
Type : A

##### Remark

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

#### General information

P280 - Wear protective gloves/protective clothing and eye/face protection. 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

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## Appearance

Physical state : Liquid

Colour : yellow

## Odour

characteristic

## Safety characteristics

Solidifying point :	( 1013 hPa )	<	0 °C
Initial boiling point and boiling range :	( 1013 hPa )	approx.	98 °C
Flash point :			not relevant
Auto-ignition temperature :			not relevant
Lower explosion limit :			not relevant
Upper explosion limit :			not relevant
Density :	( 20 °C )	approx.	1,1 g/cm <sup>3</sup>
pH :		approx.	1,5
Maximum VOC content (EC) :			5 Wt %
Maximum VOC content (Switzerland) :			5 Wt %
Corrosive to metals :			May be corrosive to metals.

## 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 mixture is chemically stable under recommended conditions of storage, use and temperature.

### 10.3 Possibility of hazardous reactions

Exothermic reaction with: Alkali (lye).

### 10.4 Conditions to avoid

No information available.

### 10.5 Incompatible materials

Metal, base

### 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 toxicological effects

#### Acute toxicity

##### Acute oral toxicity

Parameter :	ATEmix calculated
Exposure route :	Oral
Effective dose :	> 2000 mg/kg
Parameter :	LD50 ( POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1 )
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LD50 ( SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5 )
Exposure route :	Oral

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Species : Rat  
Effective dose : > 2000 mg/kg  
Parameter : LD50 ( BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 1080 mg/kg  
Method : OECD 401  
Parameter : LD50 ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 1530 mg/kg  
Parameter : LD50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 1250 - 1490 mg/kg  
Method : OECD 401

**Acute dermal toxicity**

Parameter : ATEmix calculated  
Exposure route : Dermal  
Effective dose : > 2000 mg/kg  
Parameter : LD50 ( SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5 )  
Exposure route : Dermal  
Species : Rat  
Effective dose : > 2000 mg/kg  
Parameter : LD50 ( BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3 )  
Exposure route : Dermal  
Species : Rat  
Effective dose : > 300 - 2000 mg/kg  
Method : OECD 402  
Parameter : LD50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : 841 mg/kg  
Method : OECD 402  
Parameter : LD50 ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : 2740 mg/kg

**Acute inhalation toxicity**

Parameter : ATEmix calculated  
Exposure route : Inhalation (vapour)  
Effective dose : > 20 mg/l  
Parameter : ATEmix calculated  
Exposure route : Inhalation (dust/mist)  
Effective dose : > 5 mg/l  
Parameter : LC50 ( SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : > 5 mg/l  
Exposure time : 4 h  
Parameter : LC50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 2 - 20 mg/l



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Exposure time : 4 h

## Corrosion

### Skin corrosion/irritation

No further relevant information available.

### Serious eye damage/eye irritation

No further relevant information available.

## 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 Toxicokinetics, metabolism and distribution

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

## 11.3 Other adverse effects

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

## 11.4 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 ( POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1 )

Species : Cyprinus carpio (Common Carp)

Evaluation parameter : Acute (short-term) fish toxicity

Effective dose : > 100 mg/l

Exposure time : 96 h

Parameter : LC50 ( SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5 )

Species : Cyprinus carpio (Common Carp)

Evaluation parameter : Acute (short-term) fish toxicity

Effective dose : > 100 mg/kg

Exposure time : 96 h

Parameter : LC50 ( BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3 )

Species : Lepomis macrochirus (Bluegill)

Evaluation parameter : Acute (short-term) fish toxicity

Effective dose : 1,67 mg/l

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Exposure time : 96 h  
Parameter : LC50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Species : Oncorhynchus mykiss (Rainbow trout)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 1474 mg/l  
Exposure time : 96 h  
Method : OECD 203  
Parameter : LC50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 1815 mg/l  
Exposure time : 24 h  
Method : DIN 38412 / part 11  
Parameter : LC50 ( BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3 )  
Species : Daphnia  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 3,5 mg/l  
Exposure time : 96 h  
Parameter : LC50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : 297 mg/l  
Exposure time : 21 D  
Method : OECD 211  
**Chronic (long-term) fish toxicity**  
Parameter : NOEC ( BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3 )  
Species : Fish  
Evaluation parameter : Chronic (long-term) fish toxicity  
Effective dose : 0,25 mg/l  
Exposure time : 90 D  
Parameter : LOEC ( BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3 )  
Species : Fish  
Evaluation parameter : Chronic (long-term) fish toxicity  
Effective dose : 0,51 mg/l  
Exposure time : 90 D  
**Acute (short-term) toxicity to crustacea**  
Parameter : EC50 ( POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : > 100 mg/l  
Exposure time : 48 h  
**Chronic (long-term) toxicity to crustacea**  
Parameter : NOEC ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 56 mg/l  
Exposure time : 48 h  
Method : OECD 202  
Parameter : NOEC ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Species : Brachydanio rerio (zebra-fish)  
Evaluation parameter : Chronic (long-term) fish toxicity  
Effective dose : > 100 mg/l  
Exposure time : 21 D

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Method : OECD 204  
Parameter : NOEC ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : 100 mg/l  
Exposure time : 21 D

Method : OECD 211  
Parameter : NOEC ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )  
Species : Desmodesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 100 mg/l  
Exposure time : 72 h

Method : OECD 201  
Parameter : NOEC ( BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3 )  
Species : Scenedesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 2,4 mg/l  
Exposure time : 72 h

Parameter : NOEC ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Species : Algae  
Effective dose : 286 mg/l  
Exposure time : 72 h

Method : OECD 201  
Parameter : LOEC ( BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3 )  
Species : Daphnia  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : 4 mg/l  
Exposure time : 28 D

**Acute (short-term) toxicity to aquatic algae and cyanobacteria**

Parameter : EC50 ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : > 100 mg/l  
Exposure time : 48 h  
Method : OECD 202

Parameter : EC50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Species : Algae  
Effective dose : 1840 mg/l  
Exposure time : 72 h  
Method : OECD 201

Parameter : EC50 ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )  
Species : Desmodesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : > 100 mg/l  
Exposure time : 72 h  
Method : OECD 201

Parameter : EC50 ( SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : > 100 mg/l  
Exposure time : 48 h

Parameter : EC50 ( SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5 )  
Species : Desmodesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity

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Effective dose : > 100 mg/l  
Exposure time : 72 h  
Parameter : EC50 ( POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1 )  
Species : Desmodesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : > 100 mg/l  
Exposure time : 72 h

#### Toxicity to microorganisms

Parameter : EC50 ( POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1 )  
Species : Bacteria toxicity  
Effective dose : > 1000 mg/l  
Exposure time : 3 h  
Parameter : EC50 ( SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5 )  
Species : Bacteria toxicity  
Effective dose : > 1000 mg/l

## 12.2 Persistence and degradability

### Biodegradation

Parameter : Biodegradation ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Inoculum : Biodegradation  
Degradation rate : 88 %  
Test duration : 20 D  
Parameter : Biodegradation ( POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1 )  
Inoculum : Biodegradation  
Evaluation parameter : Aerobic  
Degradation rate : 99,8 %  
Test duration : 28 D  
Evaluation : Readily biodegradable (according to OECD criteria).  
Method : OECD 301B  
Parameter : Biodegradation ( SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5 )  
Inoculum : Biodegradation  
Evaluation parameter : Aerobic  
Degradation rate : 99,8 %  
Test duration : 28 D  
Evaluation : Readily biodegradable (according to OECD criteria).  
Method : OECD 301B  
Parameter : CO<sub>2</sub> formation (% of the theoretical value) ( BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3 )  
Inoculum : Biodegradation  
Evaluation parameter : Aerobic  
Degradation rate : 85 %  
Test duration : 29 D  
Evaluation : Readily biodegradable (according to OECD criteria).  
Method : OECD 301B

According to the recipe, contains no AOX. The surfactant contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.

### 12.3 Bioaccumulative potential

No indication of bioaccumulation potential.

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

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

### 12.6 Other adverse effects

No information available.

### 12.7 Additional ecotoxicological information

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Do not allow uncontrolled discharge of product into the environment. After neutralisation, reduction in toxic effects is observed.

## SECTION 13: Disposal considerations

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. List of proposed waste codes/waste designations in accordance with EWC

### 13.1 Waste treatment methods

#### Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

##### Waste code product

07 06 01\* - aqueous washing liquids and mother liquors  
20 01 29\* - detergents containing dangerous substances.

##### Waste code packaging

15 01 02 - plastic packaging.

##### Waste treatment options

##### Appropriate disposal / Package

Contaminated packages must be completely emptied and can be re-used following proper cleaning. Handle contaminated packages in the same way as the substance itself.

### 13.2 Additional information

These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use.

## SECTION 14: Transport information

### 14.1 UN number

UN 1760

### 14.2 UN proper shipping name

#### Land transport (ADR/RID)

CORROSIVE LIQUID, N.O.S. ( PHOSPHORIC ACID )

#### Sea transport (IMDG)

CORROSIVE LIQUID, N.O.S. ( PHOSPHORIC ACID )

#### Air transport (ICAO-TI / IATA-DGR)

CORROSIVE LIQUID, N.O.S. ( PHOSPHORIC ACID )

### 14.3 Transport hazard class(es)

#### Land transport (ADR/RID)

Class(es) : 8  
Classification code : C9  
Hazard identification number (Kemler No.) : 80  
Tunnel restriction code : E  
Special provisions : LQ 5 I · E 1  
Hazard label(s) :



8

#### Sea transport (IMDG)

Class(es) : 8  
EmS-No. : F-A / S-B  
Special provisions : LQ 5 I · E 1 · IMDG-Code segregation group 1 - Acids

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Hazard label(s) :



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Air transport (ICAO-TI / IATA-DGR)

Class(es) :

8

Hazard label(s) :



8

#### 14.4 Packing group

III

#### 14.5 Environmental hazards

Land transport (ADR/RID) : No

Sea transport (IMDG) : No

Air transport (ICAO-TI / IATA-DGR) : No

#### 14.6 Special precautions for user

None

#### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No transport as bulk according to IBC Code.

### 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. : 3

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Other regulations (EU)

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

5 - 15 % anionic surfactants

< 5 % non-ionic surfactants

< 5 % amphoteric surfactants

National regulations

AT: Labelling according to Austrian regulations (Chemikaliengesetz/ChemV).

CH: Chemikalienverordnung (ChemV) and Chemikalien-Risikoreduktions-Verordnung (Chem RRV) are complied.

Technische Anleitung Luft (TA-Luft)

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

Water hazard class (WGK)

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

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08. Occupational exposure limit values - 15. Restrictions on use - 15. Technische Anleitung Luft (TA-Luft)

## 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 and Labelling of Chemicals)  
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 Classification 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)  
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  
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]

No information available.

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

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H412	Harmful to aquatic life with long lasting effects.

## 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

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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.

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