

# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)



Trade name : SURFOX-T  
Revision date : 02.11.2016  
Print date : 13.07.2017

Version (Revision) : 3.2.0 (3.1.0)

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

### 1.1 Product identifier

SURFOX-T

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

#### Relevant identified uses

Electrolyte  
Washing and cleaning products (including solvent based 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]

Skin Corr. 1B ; H314 - Skin corrosion/irritation : Category 1B ; Causes severe skin burns and eye damage.  
Met. Corr. 1 ; H290 - Corrosive to metals : Category 1 ; May be corrosive to metals.

### 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 55 % ; CAS No. : 7664-38-2

##### Hazard statements

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

##### Precautionary statements

P234 Keep only in original container.  
P310 Immediately call a POISON CENTER/doctor/....  
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P390 Absorb spillage to prevent material damage.

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## 2.3 Other hazards

None

## SECTION 3: Composition / information on ingredients

### 3.2 Mixtures

#### Hazardous ingredients

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

Weight fraction :  $\geq 50 - < 100$  %

Classification 1272/2008 [CLP] : Met. Corr. 1 ; H290 Skin Corr. 1B ; H314 Eye Dam. 1 ; H318

#### 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.

#### Following inhalation

In case of respiratory tract irritation, consult a physician. 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

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

#### After ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately.

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

Causes severe skin burns and eye damage.

### 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

### 5.2 Special hazards arising from the substance or mixture

#### Hazardous combustion products

Carbon dioxide (CO<sub>2</sub>) Carbon monoxide.

### 5.3 Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

### 5.4 Additional information

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings. Fire fighting water forms corrosive acid solutions. Move undamaged containers from immediate hazard area if it can be done safely.

## SECTION 6: Accidental release measures

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

Special danger of slipping by leaking/spilling product.

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## 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) : 8B

### 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

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(l)  
Remark : Y  
Version : 02.04.2014

Limit value type (country of origin) : STEL ( EC )  
Limit value : 2 mg/m<sup>3</sup>  
Version : 08.06.2000

Limit value type (country of origin) : TWA ( EC )  
Limit value : 1 mg/m<sup>3</sup>  
Version : 08.06.2000

#### DNEL/DMEL and PNEC values

##### DNEL/DMEL

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

### 8.2 Exposure controls

#### Personal protection equipment

##### Eye/face protection

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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 : E P1

### Remark

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

## General health and safety measures

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** : liquid

**Colour** : colourless

**Odour** : characteristic

### Safety relevant basis data

**Solidifying point** : ( 1013 hPa ) 0 °C

**Initial boiling point and boiling range** : ( 1013 hPa ) ca. 115 °C

**Flash point** : not relevant

**Lower explosion limit** : not relevant

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Upper explosion limit :			not relevant
Vapour pressure :	( 50 °C )		not relevant
Density :	( 20 °C )	ca.	1,35 - 1,4 g/cm <sup>3</sup>
Water solubility :	( 20 °C )		completely miscible
pH :	( 20 °C / 50 g/l )	ca.	1,5
Maximum VOC content (EC) :			0 Wt %
Maximum VOC content (Switzerland) :			0 Wt %

## 9.2 Other information

None

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No information available.

### 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

Violent reaction with: Alkali (lye).

### 10.5 Incompatible materials

Corrosive to metals

### 10.6 Hazardous decomposition products

Corrosive gases / vapours. Phosphorus oxides (e.g. P<sub>2</sub>O<sub>5</sub>). Hydrogen

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute effects

##### Acute oral toxicity

Parameter :	ATEmix calculated
Exposure route :	Oral
Effective dose :	> 2000 mg/kg
Parameter :	LD50 ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )
Exposure route :	Oral
Species :	Rat
Effective dose :	1530 mg/kg

##### Acute dermal toxicity

Parameter :	ATEmix calculated
Exposure route :	Dermal
Effective dose :	> 2000 mg/kg
Parameter :	LD50 ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	2740 mg/kg

### 11.2 Toxicokinetics, metabolism and distribution

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

### 11.3 Other adverse effects

Has degreasing effect on the skin. Causes burns.

### 11.4 Additional information

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

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity

##### Chronic (long-term) daphnia toxicity

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 ( 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

##### Acute (short-term) algae toxicity

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 ( 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

### 12.2 Persistence and degradability

No information available.

### 12.3 Bioaccumulative potential

No information available.

### 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

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.

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**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 · Segregation Group 1 - Acids  
Hazard label(s) :



8

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

Class(es) : 8  
Special provisions : E 1  
Hazard label(s) :



8

**14.4 Packing group**

III

**14.5 Environmental hazards**

Land transport (ADR/RID) : No

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

## 14.6 Special precautions for user

None

## SECTION 15: Regulatory information

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

#### National regulations

AT: Labelling according to Austrian regulations (Chemikaliengesetz/ChemV).  
CH: Chemikalienverordnung (ChemV) and Chemikalien-Risikoreduktions-Verordnung (Chem RRV) are complied.

#### 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).

#### Water hazard class (WGK)

Class : 1 (Slightly hazardous to water) Classification according to VwVwS

#### Other regulations, restrictions and prohibition regulations

##### Betriebsicherheitsverordnung (BetrSichV)

No flammable liquid according to BetrSichV.

### 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

None

### 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  
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 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



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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) 1272/2008 [CLP]**

No information available.

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

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

**16.6 Training advice**

None

**16.7 Additional information**

None

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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.

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