

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



Trade name : Stainless-Steel Spray, Aerosol, 400 mL  
Revision date : 31.05.2017  
Print date : 31.05.2017

Version (Revision) : 3.0.0 (2.0.0)

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

**1.1 Product identifier**

Stainless-Steel Spray, Aerosol, 400 mL

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

Corrosion inhibitor

**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]**

Eye Irrit. 2 ; H319 - Serious eye damage/eye irritation : Category 2A ; Causes serious eye irritation.  
Aerosol 3 ; H229 - Flammable aerosols : Category 3 ; Pressurised container: May burst if heated.  
STOT SE 3 ; H336 - STOT-single exposure : Category 3 ; May cause drowsiness or dizziness.

**2.2 Label elements**

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

**Hazard pictograms**



Flame (GHS02) · Exclamation mark (GHS07)

**Signal word**

Danger

**Hazard components for labelling**

ETHYL ACETATE ; CAS No. : 141-78-6

ACETONE ; CAS No. : 67-64-1

N-BUTYL ACETATE ; CAS No. : 123-86-4

**Hazard statements**

H222 Extremely flammable aerosol.  
H229 Pressurised container: May burst if heated.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.

**Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P211 Do not spray on an open flame or other ignition source.

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P251 Do not pierce or burn, even after use.  
P271 Use only outdoors or in a well-ventilated area.  
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

#### Special rules for supplemental label elements for certain mixtures

EUH208 Contains NICKEL. May produce an allergic reaction.

### 2.3 Other hazards

None

## SECTION 3: Composition / information on ingredients

### 3.2 Mixtures

#### Hazardous ingredients

DIMETHYL ETHER ; EC No. : 204-065-8; CAS No. : 115-10-6

Weight fraction :  $\geq 50 - < 100$  %  
Classification 1272/2008 [CLP] : Flam. Gas 1 ; H220 Press. Gas (Liq.) ; H280  
Substance with a common (EC) occupational exposure limit value.

XYLENE ; REACH registration No. : 01-2119488216-32-XXXX ; EC No. : 215-535-7; CAS No. : 1330-20-7

Weight fraction :  $\geq 5 - < 10$  %  
Classification 1272/2008 [CLP] : Flam. Liq. 3 ; H226 Acute Tox. 4 ; H312 Acute Tox. 4 ; H332 Skin Irrit. 2 ; H315

ACETONE ; REACH registration No. : 01-2119471330-49-XXXX ; EC No. : 200-662-2; CAS No. : 67-64-1

Weight fraction :  $\geq 5 - < 10$  %  
Classification 1272/2008 [CLP] : Flam. Liq. 2 ; H225 Eye Irrit. 2 ; H319 STOT SE 3 ; H336

ETHYL ACETATE ; EC No. : 205-500-4; CAS No. : 141-78-6

Weight fraction :  $\geq 5 - < 10$  %  
Classification 1272/2008 [CLP] : Flam. Liq. 2 ; H225 Eye Irrit. 2 ; H319 STOT SE 3 ; H336

ETHYLBENZENE ; EC No. : 202-849-4; CAS No. : 100-41-4

Weight fraction :  $\geq 5 - < 10$  %  
Classification 1272/2008 [CLP] : Flam. Liq. 2 ; H225 Asp. Tox. 1 ; H304 STOT RE 2 ; H373 Acute Tox. 4 ; H332

N-BUTYL ACETATE ; EC No. : 204-658-1; CAS No. : 123-86-4

Weight fraction :  $\geq 5 - < 10$  %  
Classification 1272/2008 [CLP] : Flam. Liq. 3 ; H226 STOT SE 3 ; H336

BUTAN-1-OL ; REACH registration No. : 01-2119484630-38-XXXX ; EC No. : 200-751-6; CAS No. : 71-36-3

Weight fraction :  $\geq 1 - < 3$  %  
Classification 1272/2008 [CLP] : Flam. Liq. 3 ; H226 Eye Dam. 1 ; H318 Acute Tox. 4 ; H302 Skin Irrit. 2 ; H315  
STOT SE 3 ; H335 STOT SE 3 ; H336

NICKEL ; EC No. : 231-111-4; CAS No. : 7440-02-0

Weight fraction :  $\geq 0,5 - < 1$  %  
Classification 1272/2008 [CLP] : STOT RE 1 ; H372 Carc. 2 ; H351 Skin Sens. 1 ; H317

#### 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. Consult a doctor immediately in the case of inhaling spray mist and show him packing or label. 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.

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## 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

Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. 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

Alcohol resistant foam. Dry extinguishing powder Sand Powder

#### Unsuitable extinguishing media

Water

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

#### Hazardous combustion products

Carbon monoxide.

### 5.3 Advice for firefighters

#### Special protective equipment for firefighters

Use suitable breathing apparatus.

### 5.4 Additional information

Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. 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

Remove all sources of ignition. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Provide adequate ventilation.

### 6.2 Environmental precautions

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

### 6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

#### Other information

Replace leaky containers and dispose them as described in section 13.

### 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 only in the original container in a cool, well-ventilated place. Keep away from sources of ignition. - No smoking.

### 7.2 Conditions for safe storage, including any incompatibilities

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## Requirements for storage rooms and vessels

Ensure adequate ventilation of the storage area. Protect from sunlight and heat. Do not store the product by temperature above 50 °C.

Observe special regulations for aerosols.

## Hints on joint storage

Storage class (TRGS 510) : 2B

## 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

DIMETHYL ETHER ; CAS No. : 115-10-6

Limit value type (country of origin) : TRGS 900 ( D )  
Limit value : 1000 ppm / 1900 mg/m<sup>3</sup>  
Peak limitation : 8(II)  
Version : 02.04.2014

Limit value type (country of origin) : TWA ( EC )  
Limit value : 1000 ppm / 1920 mg/m<sup>3</sup>  
Version : 08.06.2000

XYLENE ; CAS No. : 1330-20-7

Limit value type (country of origin) : TRGS 900 ( D )  
Limit value : 100 ppm / 440 mg/m<sup>3</sup>  
Peak limitation : 2(II)  
Remark : H  
Version : 02.04.2014

Limit value type (country of origin) : STEL ( EC )  
Limit value : 100 ppm / 442 mg/m<sup>3</sup>  
Remark : H  
Version : 08.06.2000

Limit value type (country of origin) : TWA ( EC )  
Limit value : 50 ppm / 221 mg/m<sup>3</sup>  
Remark : H  
Version : 08.06.2000

ACETONE ; CAS No. : 67-64-1

Limit value type (country of origin) : TRGS 900 ( D )  
Limit value : 500 ppm / 1200 mg/m<sup>3</sup>  
Peak limitation : 2(I)  
Version : 02.04.2014

Limit value type (country of origin) : TWA ( EC )  
Limit value : 500 ppm / 1210 mg/m<sup>3</sup>  
Version : 08.06.2000

ETHYL ACETATE ; CAS No. : 141-78-6

Limit value type (country of origin) : TRGS 900 ( D )  
Limit value : 400 ppm / 1500 mg/m<sup>3</sup>  
Peak limitation : 2(I)  
Remark : Y  
Version : 02.04.2014

ETHYLBENZENE ; CAS No. : 100-41-4

Limit value type (country of origin) : TRGS 900 ( D )  
Limit value : 20 ppm / 88 mg/m<sup>3</sup>  
Peak limitation : 2(II)  
Remark : H, Y

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Version : 02.04.2014  
Limit value type (country of origin) : STEL ( EC )  
Limit value : 200 ppm / 884 mg/m<sup>3</sup>  
Remark : H  
Version : 08.06.2000  
Limit value type (country of origin) : TWA ( EC )  
Limit value : 100 ppm / 442 mg/m<sup>3</sup>  
Remark : H  
Version : 08.06.2000

N-BUTYL ACETATE ; CAS No. : 123-86-4

Limit value type (country of origin) : TRGS 900 ( D )  
Limit value : 62 ppm / 300 mg/m<sup>3</sup>  
Peak limitation : 2(I)  
Remark : Y  
Version : 02.04.2014

BUTAN-1-OL ; CAS No. : 71-36-3

Limit value type (country of origin) : TRGS 900 ( D )  
Limit value : 100 ppm / 310 mg/m<sup>3</sup>  
Peak limitation : 1(I)  
Remark : Y  
Version : 02.04.2014

**Biological limit values**

XYLENE ; CAS No. : 1330-20-7

Limit value type (country of origin) : TRGS 903 ( D )  
Parameter : Xylene / Whole blood (B) / End of exposure or end of shift  
Limit value : 1,5 mg/l  
Version : 31.03.2004

Limit value type (country of origin) : TRGS 903 ( D )  
Parameter : Methylhippuric acid / Urine (U) / End of exposure or end of shift  
Limit value : 2 g/l  
Version : 31.03.2004

ACETONE ; CAS No. : 67-64-1

Limit value type (country of origin) : TRGS 903 ( D )  
Parameter : Acetone / Urine (U) / End of exposure or end of shift  
Limit value : 80 mg/l  
Version : 31.03.2004

ETHYLBENZENE ; CAS No. : 100-41-4

Limit value type (country of origin) : TRGS 903 ( D )  
Parameter : Ethylbenzene / Whole blood (B) / End of exposure or end of shift  
Limit value : 1 mg/l  
Version : 31.03.2004

Limit value type (country of origin) : TRGS 903 ( D )  
Parameter : Mandelic acid + Phenylglyoxyl acid / Urine (U) / End of exposure or end of shift  
Limit value : 800 mg/g Kr  
Version : 31.03.2004

BUTAN-1-OL ; CAS No. : 71-36-3

Limit value type (country of origin) : TRGS 903 ( D )  
Parameter : 1-Butanol / Urine (U) / Before next shift  
Limit value : 2 mg/g Kr  
Version : 31.03.2004

Limit value type (country of origin) : TRGS 903 ( D )  
Parameter : 1-Butanol / Urine (U) / End of exposure or end of shift  
Limit value : 10 mg/g Kr  
Version : 31.03.2004

**DNEL/DMEL and PNEC values**

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**DNEL/DMEL**

Limit value type : DNEL worker (local) ( XYLENE ; CAS No. : 1330-20-7 )  
Exposure route : Inhalation  
Exposure frequency : Short-term (acute)  
Limit value : 289 mg/m<sup>3</sup>

Limit value type : DNEL worker (local) ( ETHYLBENZENE ; CAS No. : 100-41-4 )  
Exposure route : Inhalation  
Exposure frequency : Short-term (acute)  
Limit value : 293 mg/m<sup>3</sup>

Limit value type : DNEL worker (local) ( BUTAN-1-OL ; CAS No. : 71-36-3 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 310 mg/m<sup>3</sup>

Limit value type : DNEL worker (local) ( ETHYL ACETATE ; CAS No. : 141-78-6 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 734 mg/m<sup>3</sup>

Limit value type : DNEL worker (local) ( N-BUTYL ACETATE ; CAS No. : 123-86-4 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 480 mg/m<sup>3</sup>

Limit value type : DNEL worker (local) ( ACETONE ; CAS No. : 67-64-1 )  
Exposure route : Inhalation  
Exposure frequency : Short-term (acute)  
Limit value : 2420 mg/m<sup>3</sup>

Limit value type : DNEL worker (local) ( N-BUTYL ACETATE ; CAS No. : 123-86-4 )  
Exposure route : Inhalation  
Exposure frequency : Short-term (acute)  
Limit value : 960 mg/m<sup>3</sup>

Limit value type : DNEL worker (local) ( ETHYL ACETATE ; CAS No. : 141-78-6 )  
Exposure route : Inhalation  
Exposure frequency : Short-term (acute)  
Limit value : 1468 mg/m<sup>3</sup>

Limit value type : DNEL worker (systemic) ( ETHYL ACETATE ; CAS No. : 141-78-6 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 734 mg/m<sup>3</sup>

Limit value type : DNEL worker (systemic) ( N-BUTYL ACETATE ; CAS No. : 123-86-4 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 480 mg/m<sup>3</sup>

Limit value type : DNEL worker (systemic) ( DIMETHYL ETHER ; CAS No. : 115-10-6 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 1894 mg/m<sup>3</sup>

Limit value type : DNEL worker (systemic) ( ETHYLBENZENE ; CAS No. : 100-41-4 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 77 mg/m<sup>3</sup>

Limit value type : DNEL worker (systemic) ( XYLENE ; CAS No. : 1330-20-7 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 77 mg/m<sup>3</sup>

Limit value type : DNEL worker (systemic) ( ACETONE ; CAS No. : 67-64-1 )  
Exposure route : Inhalation  
Exposure frequency : Long-term (repeated)  
Limit value : 1210 mg/m<sup>3</sup>

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Limit value type :	DNEL worker (systemic) ( ACETONE ; CAS No. : 67-64-1 )
Exposure route :	Dermal
Exposure frequency :	Long-term (repeated)
Limit value :	186 mg/m <sup>3</sup>
Limit value type :	DNEL worker (systemic) ( XYLENE ; CAS No. : 1330-20-7 )
Exposure route :	Inhalation
Exposure frequency :	Short-term (acute)
Limit value :	289 mg/m <sup>3</sup>
Limit value type :	DNEL worker (systemic) ( ETHYLBENZENE ; CAS No. : 100-41-4 )
Exposure route :	Dermal
Exposure frequency :	Long-term (repeated)
Limit value :	180 mg/kg
Limit value type :	DNEL worker (systemic) ( N-BUTYL ACETATE ; CAS No. : 123-86-4 )
Exposure route :	Inhalation
Exposure frequency :	Short-term (acute)
Limit value :	960 mg/m <sup>3</sup>
Limit value type :	DNEL worker (systemic) ( ETHYL ACETATE ; CAS No. : 141-78-6 )
Exposure route :	Inhalation
Exposure frequency :	Short-term (acute)
Limit value :	1468 mg/m <sup>3</sup>
Limit value type :	DNEL worker (systemic) ( ETHYL ACETATE ; CAS No. : 141-78-6 )
Exposure route :	Dermal
Exposure frequency :	Long-term (repeated)
Limit value :	63 mg/kg
Limit value type :	DNEL worker (systemic) ( XYLENE ; CAS No. : 1330-20-7 )
Exposure route :	Dermal
Exposure frequency :	Long-term (repeated)
Limit value :	180 mg/kg

## 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 :** CR (polychloroprene, chloroprene rubber) / NBR (Nitrile rubber)

**Breakthrough time (maximum wearing time) :** 120 min. / 480 min.

**Thickness of the glove material :** 0.8 mm. /

**Remark :** The exact break trough time has to be requested from the protective glove manufacturer and limits has to be ensured.

#### Respiratory protection

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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 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. Remove contaminated, saturated clothing immediately. Do not put any product-impregnated cleaning rags into your trouser pockets. Wash contaminated clothing prior to re-use.

### 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 : Aerosol

Colour : silver

Odour : characteristic

#### Safety relevant basis data

Melting point/melting range :	( 1013 hPa )	No data available
Initial boiling point and boiling range :	( 1013 hPa )	-24 °C
Flash point :	ca.	-42 °C
Ignition temperature :	ca.	235 °C
Lower explosion limit :	ca.	3 Vol-%
Upper explosion limit :	ca.	18,6 Vol-%
Vapour pressure :	( 50 °C )	ca. 5200 hPa
Density :	( 20 °C )	No data available
Solvent separation test :	( 20 °C )	not applicable
Water solubility :	( 20 °C )	insoluble
pH :		not applicable
Flow time :	( 20 °C )	not applicable
VOC-value :		669,5 g/l

### 9.2 Other information

None

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No information available.

### 10.2 Chemical stability

No information available.

### 10.3 Possibility of hazardous reactions

Vapours can form explosive mixtures with air.

### 10.4 Conditions to avoid

Containers can burst at temperatures above 50 °C.



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## 10.5 Incompatible materials

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

## 10.6 Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute effects

##### Acute oral toxicity

Parameter :	LD50 ( XYLENE ; CAS No. : 1330-20-7 )
Exposure route :	Oral
Species :	Rat
Effective dose :	4300 mg/kg
Parameter :	LD50 ( ETHYLBENZENE ; CAS No. : 100-41-4 )
Exposure route :	Oral
Species :	Rat
Effective dose :	ca. 3500 mg/kg
Parameter :	LD50 ( BUTAN-1-OL ; CAS No. : 71-36-3 )
Exposure route :	Oral
Species :	Rat
Effective dose :	2292 mg/kg
Method :	OECD 401
Parameter :	LD50 ( ACETONE ; CAS No. : 67-64-1 )
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LD50 ( ETHYL ACETATE ; CAS No. : 141-78-6 )
Exposure route :	Oral
Species :	Rabbit
Effective dose :	4935 mg/kg
Parameter :	LD50 ( N-BUTYL ACETATE ; CAS No. : 123-86-4 )
Exposure route :	Oral
Species :	Rat
Effective dose :	14 g/kg
Parameter :	LD50 ( N-BUTYL ACETATE ; CAS No. : 123-86-4 )
Exposure route :	Oral
Species :	Rabbit
Effective dose :	7,4 g/kg
Parameter :	LD50 ( ETHYL ACETATE ; CAS No. : 141-78-6 )
Exposure route :	Oral
Species :	Rat
Effective dose :	10200 mg/kg

##### Acute dermal toxicity

Parameter :	LD50 ( BUTAN-1-OL ; CAS No. : 71-36-3 )
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	ca. 3430 mg/kg
Parameter :	LD50 ( ETHYL ACETATE ; CAS No. : 141-78-6 )
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	> 20000 mg/kg
Parameter :	LD50 ( ACETONE ; CAS No. : 67-64-1 )
Exposure route :	Dermal
Species :	Rabbit

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Effective dose : > 7426 mg/kg  
Parameter : LD50 ( XYLENE ; CAS No. : 1330-20-7 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : 4200 mg/kg  
Parameter : LD50 ( ETHYLBENZENE ; CAS No. : 100-41-4 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : 5000 mg/kg

### Acute inhalation toxicity

Parameter : LC50 ( DIMETHYL ETHER ; CAS No. : 115-10-6 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 164000 ppm  
Exposure time : 4 h  
Parameter : LC50 ( ACETONE ; CAS No. : 67-64-1 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 55700 ppm  
Exposure time : 3 h  
Parameter : LC50 ( ETHYLBENZENE ; CAS No. : 100-41-4 )  
Exposure route : Inhalation  
Species : Mouse  
Effective dose : > 8000 ppm  
Exposure time : 20 min  
Parameter : LC50 ( BUTAN-1-OL ; CAS No. : 71-36-3 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 8000 ppm  
Parameter : LC50 ( XYLENE ; CAS No. : 1330-20-7 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 6350 mg/l  
Exposure time : 4 h  
Parameter : LC50 ( ETHYL ACETATE ; CAS No. : 141-78-6 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 1600 mg/l  
Parameter : LC50 ( N-BUTYL ACETATE ; CAS No. : 123-86-4 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : > 21 mg/l  
Exposure time : 4 h  
Method : OECD 403

### 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.

### 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

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**Acute (short-term) fish toxicity**

Parameter : LC50 ( XYLENE ; CAS No. : 1330-20-7 )  
Species : Oncorhynchus mykiss (Rainbow trout)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 7,6 mg/l  
Exposure time : 96 h  
Method : OECD 203

Parameter : LC50 ( ETHYLBENZENE ; CAS No. : 100-41-4 )  
Species : Fish  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 7 mg/l  
Exposure time : 24 h

Parameter : LC50 ( BUTAN-1-OL ; CAS No. : 71-36-3 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 1328 mg/l  
Exposure time : 48 h  
Method : OECD 202

Parameter : LC50 ( DIMETHYL ETHER ; CAS No. : 115-10-6 )  
Species : Poecilia reticulata (Guppy)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : > 4,1 g/l  
Exposure time : 96 h  
Evaluation : Harmless to fish up to the concentration tested.

Parameter : LC50 ( ACETONE ; CAS No. : 67-64-1 )  
Species : Pimephales promelas (fathead minnow)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 6210 - 8120 mg/l  
Exposure time : 96 h  
Method : OECD 203

Parameter : LC50 ( ETHYL ACETATE ; CAS No. : 141-78-6 )  
Species : Pimephales promelas (fathead minnow)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 230 mg/l  
Exposure time : 96 h

Parameter : LC50 ( N-BUTYL ACETATE ; CAS No. : 123-86-4 )  
Species : Pimephales promelas (fathead minnow)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 18 mg/l  
Exposure time : 96 h  
Method : OECD 203

Parameter : LC50 ( ACETONE ; CAS No. : 67-64-1 )  
Species : Daphnia pulex (water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 8850 mg/l  
Exposure time : 48 h

Parameter : LC50 ( DIMETHYL ETHER ; CAS No. : 115-10-6 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : > 4,4 g/l  
Exposure time : 48 h

Parameter : LC50 ( BUTAN-1-OL ; CAS No. : 71-36-3 )  
Species : Pimephales promelas (fathead minnow)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 1376 mg/l  
Exposure time : 96 h  
Method : OECD 203

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Parameter : LC50 ( ETHYLBENZENE ; CAS No. : 100-41-4 )  
Species : Fish  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 5,1 mg/l  
Exposure time : 96 h  
Parameter : LC50 ( ETHYLBENZENE ; CAS No. : 100-41-4 )  
Species : Daphnia  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : 3,6 mg/l  
Exposure time : 7 d

**Chronic (long-term) fish toxicity**

Parameter : LOEC ( ACETONE ; CAS No. : 67-64-1 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : > 79 mg/l  
Exposure time : 21 d  
Method : OECD 211

**Acute (short-term) daphnia toxicity**

Parameter : EC50 ( BUTAN-1-OL ; CAS No. : 71-36-3 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : 18 mg/l  
Exposure time : 21 d  
Method : OECD 211  
Parameter : EC50 ( BUTAN-1-OL ; CAS No. : 71-36-3 )  
Species : Selenastrum capricornutum  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 225 mg/l  
Exposure time : 96 h  
Method : OECD 201

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

Parameter : EC50 ( XYLENE ; CAS No. : 1330-20-7 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 3,82 mg/l  
Exposure time : 48 h  
Parameter : EC50 ( ETHYLBENZENE ; CAS No. : 100-41-4 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 1,8 - 2,4 mg/l  
Exposure time : 48 h  
Parameter : EC50 ( DIMETHYL ETHER ; CAS No. : 115-10-6 )  
Species : Algae  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 154917 mg/l  
Exposure time : 96 h  
Parameter : EC50 ( ETHYL ACETATE ; CAS No. : 141-78-6 )  
Species : Pimephales promelas (fathead minnow)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 220 mg/l  
Exposure time : 96 h  
Parameter : EC50 ( N-BUTYL ACETATE ; CAS No. : 123-86-4 )  
Species : Pimephales promelas (fathead minnow)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 18 mg/l  
Exposure time : 96 h  
Method : OECD 203

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Parameter : EC50 ( N-BUTYL ACETATE ; CAS No. : 123-86-4 )  
Species : Daphnia  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 44 mg/l  
Exposure time : 48 h  
Parameter : EC50 ( ETHYL ACETATE ; CAS No. : 141-78-6 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 2500 mg/l  
Exposure time : 24 h  
Method : DIN 38412 / part 11  
Parameter : EC50 ( ETHYLBENZENE ; CAS No. : 100-41-4 )  
Species : Skeletonema costatum  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 8 mg/l  
Exposure time : 24 h  
Parameter : EC50 ( XYLENE ; CAS No. : 1330-20-7 )  
Species : Pseudokirchneriella subcapitata  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 4,7 mg/l  
Exposure time : 72 h  
Method : OECD 201  
Parameter : EC50 ( ETHYLBENZENE ; CAS No. : 100-41-4 )  
Species : Skeletonema costatum  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 7,7 mg/l  
Exposure time : 96 h  
Parameter : EC50 ( ETHYL ACETATE ; CAS No. : 141-78-6 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : 2306 mg/l  
Exposure time : 24 h  
Parameter : EC50 ( N-BUTYL ACETATE ; CAS No. : 123-86-4 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : 34 mg/l  
Exposure time : 21 d  
Method : OECD 211  
Parameter : EC50 ( N-BUTYL ACETATE ; CAS No. : 123-86-4 )  
Species : Desmodesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 674,7 mg/l  
Exposure time : 72 h  
Parameter : EC50 ( ACETONE ; CAS No. : 67-64-1 )  
Species : Algae  
Effective dose : 530 mg/l  
Exposure time : 8 d  
**Bacteria toxicity**  
Parameter : EC50 ( XYLENE ; CAS No. : 1330-20-7 )  
Species : Bacteria toxicity  
Effective dose : > 175 mg/l  
Parameter : EC50 ( ETHYLBENZENE ; CAS No. : 100-41-4 )  
Species : Bacteria toxicity  
Effective dose : ca. 600 mg/l  
Exposure time : 30 min  
Parameter : EC50 ( BUTAN-1-OL ; CAS No. : 71-36-3 )  
Species : Pseudomonas putida

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Evaluation parameter : Bacteria toxicity  
Effective dose : 4390 mg/l  
Exposure time : 17 h  
Method : DIN 38412 / part 8  
Parameter : EC50 ( ACETONE ; CAS No. : 67-64-1 )  
Species : Bacteria toxicity  
Effective dose : 61,5 g/l  
Exposure time : 30 min  
Parameter : EC50 ( ETHYL ACETATE ; CAS No. : 141-78-6 )  
Species : Bacteria toxicity  
Effective dose : 5870 mg/l  
Exposure time : 15 min  
Parameter : EC10 ( DIMETHYL ETHER ; CAS No. : 115-10-6 )  
Species : Pseudomonas putida  
Evaluation parameter : Bacteria toxicity  
Effective dose : > 1600 mg/l

## 12.2 Persistence and degradability

### Biodegradation

Parameter : Biodegradation ( ETHYLBENZENE ; CAS No. : 100-41-4 )  
Inoculum : Biodegradation  
Evaluation parameter : Aerobic  
Effective dose : 70 - 80 %  
Exposure time : 28 d  
Evaluation : Readily biodegradable (according to OECD criteria).  
Parameter : Biodegradation ( BUTAN-1-OL ; CAS No. : 71-36-3 )  
Inoculum : Biodegradation  
Evaluation parameter : Aerobic  
Effective dose : 92 %  
Exposure time : 15 d  
Parameter : Biodegradation ( ETHYL ACETATE ; CAS No. : 141-78-6 )  
Inoculum : Biodegradation  
Evaluation parameter : Aerobic  
Effective dose : 79 %  
Exposure time : 20 d  
Evaluation : Readily biodegradable (according to OECD criteria).  
Parameter : Biodegradation ( N-BUTYL ACETATE ; CAS No. : 123-86-4 )  
Inoculum : Biodegradation  
Evaluation parameter : Aerobic  
Effective dose : 83 %  
Exposure time : 20 d  
Evaluation : Readily biodegradable (according to OECD criteria).  
Parameter : DOC reduction ( ACETONE ; CAS No. : 67-64-1 )  
Effective dose : > 70 %  
Evaluation : Readily biodegradable (according to OECD criteria).

### 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

None

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**SECTION 13: Disposal considerations**

The waste codes are recommendations based on the schedule use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances.

**13.1 Waste treatment methods**

**Product/Packaging disposal**

Waste codes/waste designations according to EWC/AVV

**Waste code product**

16 05 04\* - gases in pressure containers (including halons) containing dangerous substances.

**Waste code packaging**

15 01 01 - paper and cardboard packaging.

15 01 04 - metallic packaging.

**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 1950

**14.2 UN proper shipping name**

Land transport (ADR/RID)

AEROSOLS

Sea transport (IMDG)

AEROSOLS

Air transport (ICAO-TI / IATA-DGR)

AEROSOLS, FLAMMABLE

**14.3 Transport hazard class(es)**

Land transport (ADR/RID)

Class(es) : 2  
Classification code : 5F  
Hazard identification number (Kemler No.) : 23  
Tunnel restriction code : D  
Special provisions : E 0  
Hazard label(s) :



2.1

Sea transport (IMDG)

Class(es) : 2.1  
EmS-No. : F-D / S-U  
Special provisions : LQ 11 · E 0  
Hazard label(s) :



2.1

Air transport (ICAO-TI / IATA-DGR)

Class(es) : 2.1  
Special provisions : E 0

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Hazard label(s) :



2.1

#### 14.4 Packing group

#### 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

### 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: Chemikalienvorordnung (ChemV) and Chemikalien-Risikoreduktions-Verordnung (Chem RRV) are complied.

##### Restrictions of occupation

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

##### Technische Anleitung Luft (TA-Luft)

Weight fraction (Number 5.2.2. II) : < 1 %

##### Water hazard class (WGK)

Class : 2 (Hazardous to water) Classification according to VwVwS

##### Other regulations, restrictions and prohibition regulations

##### Betriebssicherheitsverordnung (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

02. Classification of the substance or mixture · 02. Label elements · 03. Hazardous ingredients · 14. Transport hazard class(es) - Land transport (ADR/RID)

#### 16.2 Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOX: adsorbable organohalogens

CAS: Chemical Abstracts Service (division of the American Chemical Society)

CLP: Classification Labelling and Packaging (Regulation (EC) No. 1272/2008)

EAK / AVV: europäischer Abfallschlüsselkatalog (european waste catalogue)

EINECS: European Inventory of Existing Commercial Chemical Substances

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

IMDG: International Maritime Code for Dangerous Goods

RCP: reciprocal calculation procedure

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

TRGS: Technische Regel für den Umgang mit Gefahrstoffen

VbF: Verordnung über brennbare Flüssigkeiten

VOC: volatile organic compound



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VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe  
WGK: Wassergefährdungsklasse (water hazardous class)

## 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) 1272/2008 [CLP]

No information available.

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

H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312+H332	Harmful in contact with skin or if inhaled.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.

## 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.