

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

### 1.1. Product identifier

Trade name or designation of the mixture	BI-OO-CYST
Registration number	-
Synonyms	None.
Issue date	07-December-2014
Version number	01
Revision date	-
Supersedes date	-

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

Identified uses	BIOCIDAL PRODUCT - TP3: veterinary hygiene disinfectant. For professional use only.
Uses advised against	None known.

### 1.3. Details of the supplier of the safety data sheet

#### Manufacturer

Company name	BIOLINK Limited
Address	Halifax Way, Pocklington Ind. Est., Pocklington York, YO42 1NR
Telephone	+ 44-(0)-1759 303 444
Contact person	paul@biolinklimited.co.uk
E-mail	info@biolinklimited.co.uk

1.4. Emergency telephone number + 44-(0)-1280-738605 (office hours only)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

#### Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Classification C;R34, Xn;R22, R43, N;R50

The full text for all R-phrases is displayed in section 16.

#### Classification according to Regulation (EC) No 1272/2008 as amended

##### Health hazards

Acute toxicity, oral	Category 4	H302 - Harmful if swallowed.
Skin corrosion/irritation	Category 1C	H314 - Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Category 1	H318 - Causes serious eye damage.
Skin sensitisation	Category 1	H317 - May cause an allergic skin reaction.

##### Environmental hazards

Hazardous to the aquatic environment, acute aquatic hazard	Category 1	H400 - Very toxic to aquatic life.
--	------------	------------------------------------

#### Hazard summary

Physical hazards	Not classified for physical hazards.
Health hazards	Harmful if swallowed. Causes burns. May cause sensitisation by skin contact. Occupational exposure to the substance or mixture may cause adverse health effects.
Environmental hazards	Very toxic to aquatic organisms.
Specific hazards	None known.
Main symptoms	Burning pain and severe corrosive skin damage. Rash. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause an allergic skin reaction. Dermatitis.

### 2.2. Label elements

**Label according to Regulation (EC) No. 1272/2008 as amended****Contains:** 2-Butoxyethanol, Acetic acid, Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., P-CHLORO-M-CRESOL**Hazard pictograms****Signal word** Danger**Hazard statements**

H302 Harmful if swallowed.  
 H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.  
 H318 Causes serious eye damage.  
 H400 Very toxic to aquatic life.

**Precautionary statements****Prevention**

P260 Do not breathe mist or vapour.  
 P264 Wash thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P272 Contaminated work clothing should not be allowed out of the workplace.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Response**

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/shower.  
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 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/doctor.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
 P362 + P364 Take off contaminated clothing and wash it before reuse.  
 P391 Collect spillage.

**Storage**

P405 Store locked up.

**Disposal**

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Supplemental label information** None.**2.3. Other hazards** None known.**SECTION 3: Composition/information on ingredients****3.2. Mixtures****General information**

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	20 - < 30	85536-14-7 287-494-3	-	-	
<b>Classification:</b>		<b>DSD:</b> C;R34, Xn;R22			
		<b>CLP:</b> Acute Tox. 4;H302, Skin Corr. 1;H314			
P-CHLORO-M-CRESOL	20 - < 30	59-50-7 200-431-6	-	604-014-00-3	
<b>Classification:</b>		<b>DSD:</b> Xn;R21/22, Xi;R41, R43, N;R50			
		<b>CLP:</b> Acute Tox. 4;H302, Acute Tox. 4;H312, Skin Sens. 1;H317, Eye Dam. 1;H318, Carc. 2;H351, Aquatic Acute 1;H400			

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
2-Butoxyethanol	10 - < 20	111-76-2 203-905-0	-	603-014-00-0	#
<b>Classification:</b>	<b>DSD:</b>	Xn;R20/21/22, Xi;R36/38			
	<b>CLP:</b>	Acute Tox. 4;H302, Acute Tox. 4;H312, Skin Irrit. 2;H315, Eye Irrit. 2;H319, Acute Tox. 4;H332			
Acetic acid	10 - < 20	64-19-7 200-580-7	-	607-002-00-6	#
<b>Classification:</b>	<b>DSD:</b>	R10, C;R35			
	<b>CLP:</b>	Flam. Liq. 3;H226, Skin Corr. 1A;H314			

#### List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

#: This substance has been assigned Community workplace exposure limit(s).

Note B: Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: "nitric acid ...%". In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

**Composition comments** The full text for all R- and H-phrases is displayed in section 16. All concentrations are in percent by weight unless otherwise indicated.

## SECTION 4: First aid measures

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

### 4.1. Description of first aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact** Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control centre immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control centre immediately.

**Ingestion** Call a physician or poison control centre immediately. Rinse mouth. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**4.2. Most important symptoms and effects, both acute and delayed** Effects on exposure by inhalation may include sore throat, cough, burning sensation, shortness of breath and labored breathing. Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.

**4.3. Indication of any immediate medical attention and special treatment needed** Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

## SECTION 5: Firefighting measures

**General fire hazards** No unusual fire or explosion hazards noted.

### 5.1. Extinguishing media

**Suitable extinguishing media** Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media** Use of water may result in the formation of very toxic aqueous solution. Do not allow run-off from firefighting to enter drains or water courses.

**5.2. Special hazards arising from the substance or mixture** During fire, gases hazardous to health may be formed. Combustion products may include: carbon oxides, sulfur compounds and chlorine compounds.

### 5.3. Advice for firefighters

**Special protective equipment for firefighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Special fire fighting procedures** Move containers from fire area if you can do so without risk.

**Specific methods**

Use standard firefighting procedures and consider the hazards of other involved materials.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not get in eyes, on skin, on clothing. Do not breathe mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8.

**For emergency responders**

Keep unnecessary personnel away. Use personal protection recommended in section 8 of the SDS.

**6.2. Environmental precautions**

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

**6.3. Methods and material for containment and cleaning up**

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapours or divert vapour cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

**6.4. Reference to other sections**

For personal protection, see section 8. For waste disposal, see section 13 of the SDS.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

Do not breathe mist or vapour. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

**7.2. Conditions for safe storage, including any incompatibilities**

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see section 10 of the SDS).

**7.3. Specific end use(s)**

BIOCIDAL PRODUCT - TP3: veterinary hygiene disinfectant. For professional use only.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Occupational exposure limits****Austria. MAK List**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	MAK	98 mg/m3
	STEL	20 ppm 200 mg/m3
Acetic acid (CAS 64-19-7)	Ceiling	40 ppm 50 mg/m3
		MAK

**Belgium. Exposure Limit Values.**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m3
	TWA	50 ppm 98 mg/m3
		20 ppm
Acetic acid (CAS 64-19-7)	STEL	38 mg/m3 15 ppm
		TWA

**Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m <sup>3</sup>
	TWA	50 ppm 98 mg/m <sup>3</sup> 20 ppm
Acetic acid (CAS 64-19-7)	STEL	37 mg/m <sup>3</sup>
	TWA	25 mg/m <sup>3</sup>

**Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	MAC	98 mg/m <sup>3</sup>
	STEL	20 ppm 246 mg/m <sup>3</sup> 50 ppm
Acetic acid (CAS 64-19-7)	MAC	25 mg/m <sup>3</sup> 10 ppm

**Czech Republic. OELs. Government Decree 361**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	Ceiling	200 mg/m <sup>3</sup>
	TWA	100 mg/m <sup>3</sup>
Acetic acid (CAS 64-19-7)	Ceiling	35 mg/m <sup>3</sup>
	TWA	25 mg/m <sup>3</sup>

**Denmark. Exposure Limit Values**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TLV	98 mg/m <sup>3</sup>
		20 ppm
Acetic acid (CAS 64-19-7)	TLV	25 mg/m <sup>3</sup> 10 ppm

**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m <sup>3</sup>
	TWA	50 ppm 98 mg/m <sup>3</sup> 20 ppm
		20 ppm
Acetic acid (CAS 64-19-7)	STEL	25 mg/m <sup>3</sup> 10 ppm
	TWA	25 mg/m <sup>3</sup> 10 ppm
		10 ppm
P-CHLORO-M-CRESOL (CAS 59-50-7)	STEL	6 mg/m <sup>3</sup>
	TWA	3 mg/m <sup>3</sup>

**Finland. Workplace Exposure Limits**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	250 mg/m <sup>3</sup>
	TWA	50 ppm 98 mg/m <sup>3</sup> 20 ppm
		20 ppm
Acetic acid (CAS 64-19-7)	STEL	25 mg/m <sup>3</sup> 10 ppm
	TWA	13 mg/m <sup>3</sup> 5 ppm
		5 ppm

**France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	VLE	246 mg/m <sup>3</sup>
		50 ppm
Acetic acid (CAS 64-19-7)	VME	49 mg/m <sup>3</sup>
		10 ppm
	VLE	25 mg/m <sup>3</sup>
		10 ppm

**Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	TWA	49 mg/m <sup>3</sup>
		10 ppm
Acetic acid (CAS 64-19-7)	TWA	25 mg/m <sup>3</sup>
		10 ppm

**Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	AGW	49 mg/m <sup>3</sup>
		10 ppm
Acetic acid (CAS 64-19-7)	AGW	25 mg/m <sup>3</sup>
		10 ppm

**Greece. OELs (Decree No. 90/1999, as amended)**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	TWA	120 mg/m <sup>3</sup>
		25 ppm
Acetic acid (CAS 64-19-7)	STEL	37 mg/m <sup>3</sup>
		15 ppm
	TWA	25 mg/m <sup>3</sup>
		10 ppm

**Hungary. OELs. Joint Decree on Chemical Safety of Workplaces**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m <sup>3</sup>
	TWA	98 mg/m <sup>3</sup>
Acetic acid (CAS 64-19-7)	STEL	25 mg/m <sup>3</sup>
	TWA	25 mg/m <sup>3</sup>

**Iceland. OELs. Regulation 154/1999 on occupational exposure limits**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m <sup>3</sup>
		50 ppm
	TWA	100 mg/m <sup>3</sup>
Acetic acid (CAS 64-19-7)		20 ppm
	TWA	25 mg/m <sup>3</sup>
		10 ppm

**Ireland. Occupational Exposure Limits**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m <sup>3</sup>
		50 ppm
Acetic acid (CAS 64-19-7)	TWA	98 mg/m <sup>3</sup>
		20 ppm
	STEL	37 mg/m <sup>3</sup>
		15 ppm

**Ireland. Occupational Exposure Limits**

Components	Type	Value
	TWA	25 mg/m3 10 ppm

**Italy. OELs**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m3
	TWA	50 ppm 98 mg/m3 20 ppm
Acetic acid (CAS 64-19-7)	TWA	25 mg/m3 10 ppm

**Latvia. OELs. Occupational exposure limit values of chemical substances in work environment**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m3
	TWA	50 ppm 98 mg/m3 20 ppm
Acetic acid (CAS 64-19-7)	TWA	25 mg/m3 10 ppm

**Lithuania. OELs. Limit Values for Chemical Substances, General Requirements (Hygiene Norm HN 23:2007)**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	100 mg/m3
	TWA	20 ppm 50 mg/m3 10 ppm
Acetic acid (CAS 64-19-7)	TWA	25 mg/m3 10 ppm

**Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m3
	TWA	50 ppm 98 mg/m3 20 ppm
Acetic acid (CAS 64-19-7)	TWA	25 mg/m3 10 ppm

**Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m3
	TWA	50 ppm 98 mg/m3 20 ppm
Acetic acid (CAS 64-19-7)	TWA	25 mg/m3 10 ppm

**Netherlands. OELs (binding)**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m3
	TWA	100 mg/m3

**Norway. Administrative Norms for Contaminants in the Workplace**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	TLV	50 mg/m <sup>3</sup>
		10 ppm
Acetic acid (CAS 64-19-7)	TLV	25 mg/m <sup>3</sup>
		10 ppm

**Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	STEL	200 mg/m <sup>3</sup>
	TWA	98 mg/m <sup>3</sup>
Acetic acid (CAS 64-19-7)	STEL	30 mg/m <sup>3</sup>
	TWA	15 mg/m <sup>3</sup>

**Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m <sup>3</sup>
		50 ppm
	TWA	98 mg/m <sup>3</sup>
		20 ppm
Acetic acid (CAS 64-19-7)	TWA	25 mg/m <sup>3</sup>
		10 ppm

**Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm
Acetic acid (CAS 64-19-7)	STEL	15 ppm
	TWA	10 ppm

**Romania. OELs. Protection of workers from exposure to chemical agents at the workplace**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m <sup>3</sup>
		50 ppm
	TWA	150 mg/m <sup>3</sup>
		20 ppm
Acetic acid (CAS 64-19-7)	TWA	25 mg/m <sup>3</sup>
		10 ppm

**Slovakia. OELs. Decree of the government of the Slovak Republic concerning protection of health in work with chemical agents**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	TWA	98 mg/m <sup>3</sup>
		20 ppm
Acetic acid (CAS 64-19-7)	TWA	25 mg/m <sup>3</sup>
		10 ppm

**Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m <sup>3</sup>
		50 ppm

**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)**

<b>Components</b>	<b>Type</b>	<b>Value</b>
2-Butoxyethanol (CAS 111-76-2)	TWA	98 mg/m <sup>3</sup>
		20 ppm



**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)**

Components	Type	Value
Acetic acid (CAS 64-19-7)	TWA	25 mg/m <sup>3</sup>
		10 ppm

**Spain. Occupational Exposure Limits**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	245 mg/m <sup>3</sup>
		50 ppm
	TWA	98 mg/m <sup>3</sup>
		20 ppm
Acetic acid (CAS 64-19-7)	STEL	37 mg/m <sup>3</sup>
		15 ppm
	TWA	25 mg/m <sup>3</sup>
		10 ppm

**Sweden. Occupational Exposure Limit Values**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	100 mg/m <sup>3</sup>
		20 ppm
	TWA	50 mg/m <sup>3</sup>
		10 ppm
Acetic acid (CAS 64-19-7)	STEL	25 mg/m <sup>3</sup>
		10 ppm
	TWA	13 mg/m <sup>3</sup>
		5 ppm
P-CHLORO-M-CRESOL (CAS 59-50-7)	STEL	6 mg/m <sup>3</sup>
		3 mg/m <sup>3</sup>
	TWA	3 mg/m <sup>3</sup>

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	98 mg/m <sup>3</sup>
		20 ppm
	TWA	49 mg/m <sup>3</sup>
		10 ppm
Acetic acid (CAS 64-19-7)	STEL	50 mg/m <sup>3</sup>
		20 ppm
	TWA	25 mg/m <sup>3</sup>
		10 ppm

**UK. EH40 Workplace Exposure Limits (WELs)**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m <sup>3</sup>
		50 ppm
	TWA	123 mg/m <sup>3</sup>
		25 ppm

**EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	STEL	246 mg/m <sup>3</sup>
		50 ppm
	TWA	98 mg/m <sup>3</sup>
		20 ppm
Acetic acid (CAS 64-19-7)	TWA	25 mg/m <sup>3</sup>
		10 ppm

## Biological limit values

### Czech Republic. Limit Values for Indicators of Biological Exposure Tests in Urine and Blood, Annex 2, Tables 1 and 2, Government Decree 432/2003 Sb.

Components	Value	Determinant	Specimen	Sampling time
2-Butoxyethanol (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (with hydrolysis)	Creatinine in urine	*
	0,17 mmol/mmol	Butoxyacetic acid (with hydrolysis)	Creatinine in urine	*

\* - For sampling details, please see the source document.

### Germany. TRGS 903, BAT List (Biological Limit Values)

Components	Value	Determinant	Specimen	Sampling time
2-Butoxyethanol (CAS 111-76-2)	100 mg/l	Butoxyessigsäure	Urine	*

\* - For sampling details, please see the source document.

### Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4

Components	Value	Determinant	Specimen	Sampling time
2-Butoxyethanol (CAS 111-76-2)	200 mg/g	Ácido butoxiacético, con hidrólisis	Creatinine in urine	*

\* - For sampling details, please see the source document.

### Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

Components	Value	Determinant	Specimen	Sampling time
2-Butoxyethanol (CAS 111-76-2)	200 mg/l	Gesamt-Butoxyessigsäure	Urine	*
	100 mg/l	Butoxyessigsäure	Urine	*

\* - For sampling details, please see the source document.

### UK. EH40 Biological Monitoring Guidance Values (BMGVs)

Components	Value	Determinant	Specimen	Sampling time
2-Butoxyethanol (CAS 111-76-2)	240 mmol/mol	Butoxyacetic acid	Creatinine in urine	*

\* - For sampling details, please see the source document.

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no-effect level (DNEL)** Not available.

**Predicted no effect concentrations (PNECs)** Not available.

## Exposure guidelines

### EU Exposure Limit Values: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

## 8.2. Exposure controls

**Appropriate engineering controls** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

## Individual protection measures, such as personal protective equipment

**General information** Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Eye/face protection** Wear approved, tight fitting indirect vented or non-vented safety goggles where splashing is probable. Face shield is recommended.

### Skin protection

**- Hand protection** Wear appropriate chemical resistant gloves.

**- Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

<b>Respiratory protection</b>	Chemical respirator with organic vapour cartridge and full facepiece.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>Hygiene measures</b>	Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.
<b>Environmental exposure controls</b>	Inform appropriate managerial or supervisory personnel of all environmental releases.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Colour</b>	Greenish-brown.
<b>Odour</b>	Not available.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	> 100 °C (> 212 °F)
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	1,08
<b>Solubility(ies)</b>	Completely soluble.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidizing properties</b>	Not available.
<b>9.2. Other information</b>	No relevant additional information available.

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>10.2. Chemical stability</b>	Material is stable under normal conditions.
<b>10.3. Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>10.4. Conditions to avoid</b>	Contact with incompatible materials.
<b>10.5. Incompatible materials</b>	Strong oxidising agents. Bases.
<b>10.6. Hazardous decomposition products</b>	No hazardous decomposition products are known.

## SECTION 11: Toxicological information

<b>General information</b>	Occupational exposure to the substance or mixture may cause adverse effects.
<b>Information on likely routes of exposure</b>	
<b>Inhalation</b>	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

**Skin contact** Causes severe skin burns. May cause an allergic skin reaction.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

**Eye contact** Causes serious eye damage.

**Ingestion** Causes digestive tract burns. Harmful if swallowed.

**Symptoms** Effects on exposure by inhalation may include sore throat, cough, burning sensation, shortness of breath and labored breathing. Burning pain and severe corrosive skin damage. Irritation of nose and throat. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.

### 11.1. Information on toxicological effects

**Acute toxicity** Harmful if swallowed. May cause an allergic skin reaction.

Components	Species	Test results
------------	---------	--------------

Acetic acid (CAS 64-19-7)

**Acute**

*Dermal*

LD50	Rabbit	1060 mg/kg
------	--------	------------

*Inhalation*

LC50	Rat	11,4 mg/l, 4 Hours
------	-----	--------------------

*Oral*

LD50	Rat	3310 mg/kg
------	-----	------------

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs. (CAS 85536-14-7)

**Acute**

*Oral*

LD50	Rat	1219 - 1470 mg/kg
------	-----	-------------------

**Skin corrosion/irritation** Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation** Causes serious eye damage.

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

**Skin sensitisation** May cause an allergic skin reaction.

**Germ cell mutagenicity** Due to partial or complete lack of data the classification is not possible.

**Carcinogenicity** Due to partial or complete lack of data the classification is not possible.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

2-Butoxyethanol (CAS 111-76-2) 3 Not classifiable as to carcinogenicity to humans.

**Reproductive toxicity** Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - single exposure** Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - repeated exposure** Due to partial or complete lack of data the classification is not possible.

**Aspiration hazard** Due to partial or complete lack of data the classification is not possible.

**Mixture versus substance information** No information available.

**Other information** Not available.

## SECTION 12: Ecological information

**12.1. Toxicity** Very toxic to aquatic life.

Components	Species	Test results
------------	---------	--------------

Acetic acid (CAS 64-19-7)

**Aquatic**

Crustacea	EC50	Water flea (Daphnia magna)	65 mg/l, 48 hours
-----------	------	----------------------------	-------------------

Fish	LC50	Bluegill (Lepomis macrochirus)	75 mg/l, 96 hours
------	------	--------------------------------	-------------------

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs. (CAS 85536-14-7)

**Aquatic**

Fish	LC50	Lepomis macrochirus	1,67 mg/l, 96 hours
------	------	---------------------	---------------------

**12.2. Persistence and degradability** No data is available on the degradability of this product.

**12.3. Bioaccumulative potential** No data available.

**Partition coefficient**

**n-octanol/water (log Kow)**

2-Butoxyethanol (CAS 111-76-2)	0,83
Acetic acid (CAS 64-19-7)	-0,17
P-CHLORO-M-CRESOL (CAS 59-50-7)	3,1

**Bioconcentration factor (BCF)** Not available.

**12.4. Mobility in soil** This product is water soluble and may disperse in soil.

**12.5. Results of PBT and vPvB assessment** Not a PBT or vPvB substance or mixture.

**12.6. Other adverse effects** None known.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**Residual waste** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

**EU waste code** The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Disposal methods/information** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Special precautions** Dispose in accordance with all applicable regulations.

## SECTION 14: Transport information

### ADR

**14.1. UN number** UN3265  
**14.2. UN proper shipping name** Corrosive liquid, acidic, organic, n.o.s. (Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.; Acetic acid)  
**14.3. Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Label(s)** 8  
**Hazard No. (ADR)** 80  
**Tunnel restriction code** E  
**14.4. Packing group** III  
**14.5. Environmental hazards** No.  
**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

### RID

**14.1. UN number** UN3265  
**14.2. UN proper shipping name** Corrosive liquid, acidic, organic, n.o.s. (Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.; Acetic acid)  
**14.3. Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Label(s)** 8  
**14.4. Packing group** III  
**14.5. Environmental hazards** No.  
**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

### ADN

**14.1. UN number** UN3265  
**14.2. UN proper shipping name** Corrosive liquid, acidic, organic, n.o.s. (Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.; Acetic acid)  
**14.3. Transport hazard class(es)**  
**Class** 8

<b>Subsidiary risk</b>	-
<b>Label(s)</b>	8
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

#### IATA

<b>14.1. UN number</b>	UN3265
<b>14.2. UN proper shipping name</b>	Corrosive liquid, acidic, organic, n.o.s. (Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.; Acetic Acid)
<b>14.3. Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>ERG Code</b>	8L
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

#### IMDG

<b>14.1. UN number</b>	UN3265
<b>14.2. UN proper shipping name</b>	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.; Acetic Acid)
<b>14.3. Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	F-A, S-B
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

## SECTION 15: Regulatory information

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

#### EU regulations

- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I**  
Not listed.
- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II**  
Not listed.
- Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended**  
Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended**  
Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended**  
Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended**  
Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended**  
Not listed.
- Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry**  
Not listed.
- Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**  
Not listed.

#### Authorisations

- Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended**  
Not listed.

#### Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not listed.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding

Not listed.

#### Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances

Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

2-Butoxyethanol (CAS 111-76-2)

Acetic acid (CAS 64-19-7)

P-CHLORO-M-CRESOL (CAS 59-50-7)

Directive 94/33/EC on the protection of young people at work

Acetic acid (CAS 64-19-7)

P-CHLORO-M-CRESOL (CAS 59-50-7)

#### Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

#### National regulations

Young people under 18 years old are not allowed to work with this product according to the EU Directive 94/33/EC on the protection of young people at work. Follow national regulation for work with chemical agents.

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

### SECTION 16: Other information

#### List of abbreviations

Not available.

#### References

Not available.

#### Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

#### Full text of any statements or R-phrases and H-statements under Sections 2 to 15

R10 Flammable.  
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
R21/22 Harmful in contact with skin and if swallowed.  
R22 Harmful if swallowed.  
R34 Causes burns.  
R35 Causes severe burns.  
R36/38 Irritating to eyes and skin.  
R41 Risk of serious damage to eyes.  
R43 May cause sensitisation by skin contact.  
R50 Very toxic to aquatic organisms.  
H226 Flammable liquid and vapour.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
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.  
H351 Suspected of causing cancer.  
H400 Very toxic to aquatic life.

#### Training information

Follow training instructions when handling this material.

#### Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment. The information in the sheet was written based on the best knowledge and experience currently available.