

**Elektrolyt-Lösung Ethanol vergällt 80 % (V/V) Ethylenglycolmonobutylether 10 % (V/V)  
Perchlorsäure..**

Revision: 08.01.2025

Product code: 34156

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

**1.1. Product identifier**

Elektrolyt-Lösung Ethanol vergällt 80 % (V/V) Ethylenglycolmonobutylether 10 % (V/V) Perchlorsäure..

UFI: XFK1-S335-V008-M83T

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

**Use of the substance/mixture**

Reagents and laboratory chemicals  
Only for laboratory and analysis purposes.

**Uses advised against**

Do not use for private purposes (household).

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

Company name:	AnalytiChem GmbH	
	ACD	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
E-mail:	info@analytichem.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
E-mail:	produktsicherheit@analytichem.de	
Internet:	www.analytichem.de	
Responsible Department:	Abteilung Produktsicherheit	

**1.4. Emergency telephone number:**

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

**Further Information**

This product is a mixture. REACH Registration Number see section 3.

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Regulation (EC) No 1272/2008**

Flam. Liq. 2; H225  
Ox. Liq. 2; H272  
Skin Corr. 1B; H314  
Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

**2.2. Label elements**

**Regulation (EC) No 1272/2008**

**Hazard components for labelling**  
perchloric acid

**Signal word:** Danger

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

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## Pictograms:



## Hazard statements

- H225 Highly flammable liquid and vapour.  
H272 May intensify fire; oxidiser.  
H314 Causes severe skin burns and eye damage.

## Precautionary statements

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing and eye protection/face protection.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER/doctor.

**2.3. Other hazards**

No data available

**SECTION 3: Composition/information on ingredients****3.2. Mixtures**

## Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
64-17-5	ethanol			70 - < 75 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			
7601-90-3	perchloric acid			10 - < 15 %
	231-512-4	017-006-00-4		
	Flam. Liq. 3, Ox. Liq. 1, Skin Corr. 1A; H226 H271 H314			
111-76-2	2-butoxyethanol			10 - < 15 %
	203-905-0	603-014-00-0	01-2119475108-36	
	Acute Tox. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2; H331 H302 H315 H319			

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

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**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
64-17-5	200-578-6	ethanol	70 - < 75 %
		inhalation: LC50 = 124,7 mg/l (vapours); oral: LD50 = 10470 mg/kg Eye Irrit. 2; H319: >= 50 - 100	
7601-90-3	231-512-4	perchloric acid	10 - < 15 %
		oral: LD50 = 200 - 2000 mg/kg Ox. Liq. 1; H271: >= 50 - 100 Ox. Liq. 2; H272: >= 0 - < 50 Skin Corr. 1A; H314: >= 50 - 100 Skin Corr. 1B; H314: >= 10 - < 50 Skin Irrit. 2; H315: >= 1 - < 10 Eye Irrit. 2; H319: >= 1 - < 10	
111-76-2	203-905-0	2-butoxyethanol	10 - < 15 %
		inhalation: ATE 3 mg/l (vapours); dermal: LD50 = > 2000 mg/kg; oral: ATE 1200 mg/kg	

**Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

Do not breathe vapour/aerosol.

**After inhalation**

Provide fresh air.

If breathing is irregular or stopped, administer artificial respiration.

Call a physician immediately.

**After contact with skin**

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

**After contact with eyes**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

**After ingestion**

Rinse mouth immediately and drink plenty of water.

Observe risk of aspiration if vomiting occurs.

Call a physician immediately.

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

No data available

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

No data available

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

no restriction

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**5.2. Special hazards arising from the substance or mixture**

Combustible liquids  
Hazardous combustion products  
In case of fire may be liberated:  
Carbon dioxide (CO<sub>2</sub>)  
Carbon monoxide  
Vapours are heavier than air, spread along floors and form explosive mixtures with air.  
Heating causes rise in pressure with risk of bursting.

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.  
In case of fire and/or explosion do not breathe fumes.  
Avoid contact with skin, eyes and clothes.

**Additional information**

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.  
Use water spray jet to protect personnel and to cool endangered containers.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Vapours can form explosive mixtures with air.

**For non-emergency personnel**

Provide adequate ventilation.  
Use personal protection equipment.  
Avoid contact with skin, eyes and clothes.  
Remove persons to safety.  
Emergency procedures  
Consult an expert  
Do not breathe dust/fume/gas/mist/vapours/spray.

**For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.  
The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.  
Danger of explosion

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

Cover drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

**Other information**

Provide adequate ventilation.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

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**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****Advice on safe handling**

Read label before use. Handle and open container with care.

When using do not eat, drink, smoke, sniff. Keep container tightly closed.

Use personal protection equipment. Use extractor hood (laboratory).

Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation.

**Advice on protection against fire and explosion**

Take action to prevent static discharges. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Advice on general occupational hygiene**

Keep away from food, drink and animal feedingstuffs.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

**Further information on handling**

Take off immediately all contaminated clothing and wash it before reuse.

Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Store in a place accessible by authorized persons only.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep in a cool, well-ventilated place.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Hints on joint storage**

national regulations

**Further information on storage conditions**

Keep cool. Protect from sunlight.

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

Laboratory chemicals

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

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
111-76-2	2-Butoxyethanol (EBE)	20	98		TWA (8 h)	
		50	246		STEL (15 min)	
64-17-5	Ethyl alcohol	1000	-		STEL (15 min)	

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**Biological limit values**

CAS No	Substance	Parameter	Value	Test material	Sampling time
111-76-2	2-Butoxyethanol	BAA	200 mg/g	Creatinine	End of shift

**DNEL/DMEL values**

CAS No	Substance	DNEL type	Exposure route	Effect	Value
64-17-5	ethanol	Worker DNEL, long-term	inhalation	systemic	950 mg/m <sup>3</sup>
		Worker DNEL, long-term	dermal	systemic	343 mg/kg bw/day
		Consumer DNEL, long-term	inhalation	systemic	114 mg/m <sup>3</sup>
		Consumer DNEL, long-term	dermal	systemic	206 mg/kg bw/day
		Consumer DNEL, long-term	oral	systemic	87 mg/kg bw/day
7601-90-3	perchloric acid	Consumer DNEL, long-term	oral	systemic	0,0167 mg/kg bw/day
111-76-2	2-butoxyethanol	Consumer DNEL, acute	oral	systemic	26,7 mg/kg bw/day
		Consumer DNEL, long-term	oral	systemic	6,3 mg/kg bw/day
		Worker DNEL, long-term	inhalation	systemic	98 mg/m <sup>3</sup>
		Worker DNEL, acute	inhalation	systemic	1091 mg/m <sup>3</sup>
		Worker DNEL, acute	inhalation	local	246 mg/m <sup>3</sup>
		Worker DNEL, long-term	dermal	systemic	125 mg/kg bw/day
		Worker DNEL, acute	dermal	systemic	89 mg/kg bw/day
		Consumer DNEL, long-term	inhalation	systemic	59 mg/m <sup>3</sup>
		Consumer DNEL, acute	inhalation	systemic	426 mg/m <sup>3</sup>
		Consumer DNEL, acute	inhalation	local	147 mg/m <sup>3</sup>
		Consumer DNEL, long-term	dermal	systemic	75 mg/kg bw/day
		Consumer DNEL, acute	dermal	systemic	89 mg/kg bw/day

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**PNEC values**

CAS No	Substance	
Environmental compartment		Value
64-17-5	ethanol	
Freshwater		0,96 mg/l
Freshwater (intermittent releases)		2,75 mg/l
Marine water		0,79 mg/l
Freshwater sediment		3,6 mg/kg
Marine sediment		2,9 mg/kg
Secondary poisoning		380 mg/kg
Micro-organisms in sewage treatment plants (STP)		580 mg/l
Soil		0,63 mg/kg
7601-90-3	perchloric acid	
Freshwater		0,021 mg/l
Freshwater (intermittent releases)		147 mg/l
Marine water		0,002 mg/l
Freshwater sediment		4,67 mg/kg
Marine sediment		0,467 mg/kg
Micro-organisms in sewage treatment plants (STP)		8,2 mg/l
Soil		0,021 mg/kg
111-76-2	2-butoxyethanol	
Freshwater		8,8 mg/l
Freshwater (intermittent releases)		26,4 mg/l
Marine water		0,88 mg/l
Freshwater sediment		34,6 mg/kg
Marine sediment		3,46 mg/kg
Secondary poisoning		20 mg/kg
Micro-organisms in sewage treatment plants (STP)		463 mg/l
Soil		2,33 mg/kg

**8.2. Exposure controls****Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

goggles

Face protection umbrella

**Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. 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.

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Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) With specification (test according to EN374):

By long-term hand contact

Trade name/designation KCL 897 Butoject®

Suitable material: Butyl caoutchouc (butyl rubber) 0,3 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation KCL 730 Camatril® Velours

Suitable material: NBR (Nitrile rubber) 0,4 mm

Wearing time with occasional contact (splashes): > 120 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet (>, <) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

**Skin protection**

Take off immediately all contaminated clothing and wash it before reuse.

Wear fire resistant or flame retardant clothing.

Wash hands and face before breaks and after work and take a shower if necessary.

Draw up and observe skin protection programme.

**Respiratory protection**

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Thermal hazards**

No data available

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

Danger of explosion

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	Liquid	
Colour:	colourless	
Odour:	characteristic	
Odour threshold:	No data available	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and boiling range:		>35 °C
Flammability:		No data available
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		<21 °C
Auto-ignition temperature:		No data available



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Decomposition temperature:	No data available
pH-Value:	No data available
Viscosity / kinematic:	No data available
Water solubility:	No data available
Solubility in other solvents	No data available
No data available	
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	No data available
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	No data available
Relative density:	No data available
Bulk density:	No data available
Relative vapour density:	No data available
Particle characteristics:	No data available

#### 9.2. Other information

##### Information with regard to physical hazard classes

###### Explosive properties

Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Sustained combustibility: No data available

###### Self-ignition temperature

Solid: No data available

Gas: No data available

###### Oxidizing properties

Oxidizing

##### Other safety characteristics

Evaporation rate: No data available

Solvent separation test: No data available

Solvent content: No data available

Solid content: No data available

Sublimation point: No data available

Softening point: No data available

Pour point: No data available

Viscosity / dynamic: No data available

Flow time: No data available

##### Further Information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Vapours may form explosive mixtures with air.

Oxidizing

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

Oxidising agent

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**10.4. Conditions to avoid**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**10.5. Incompatible materials**

various plastics

**10.6. Hazardous decomposition products**

SECTION 5: Firefighting measures

**Further information**

No data available

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

**Acute toxicity**

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

**ATE<sub>mix</sub> calculated**

ATE (oral) &gt; 5000 mg/kg; ATE (dermal) &gt; 2000 mg/kg; ATE (inhalation vapour) &gt; 20 mg/l; ATE (inhalation dust/mist) &gt; 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-17-5	ethanol				
	oral	LD50 10470 mg/kg	Rat	Study report (1976)	OECD Guideline 401
	inhalation (4 h) vapour	LC50 124,7 mg/l	Rat	Study report (1980)	OECD Guideline 403
7601-90-3	perchloric acid				
	oral	LD50 200 - 2000 mg/kg	Rat	Study report (2003)	OECD Guideline 423
111-76-2	2-butoxyethanol				
	oral	ATE 1200 mg/kg			
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1993)	OECD Guideline 402
	inhalation vapour	ATE 3 mg/l			

**Irritation and corrosivity**

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

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

**Sensitising effects**

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

**Carcinogenic/mutagenic/toxic effects for reproduction**

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

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

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**STOT-repeated exposure**

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

**Aspiration hazard**

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

**Information on likely routes of exposure**

There are no data available on the mixture itself.

**Specific effects in experiment on an animal**

There are no data available on the mixture itself.

**Additional information on tests**

There are no data available on the mixture itself.

**Practical experience**

There are no data available on the mixture itself.

**11.2. Information on other hazards****Endocrine disrupting properties**

There are no data available on the mixture itself.

**Other information**

No data available

**Further information**

There are no data available on the mixture itself.

**SECTION 12: Ecological information****12.1. Toxicity**

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

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
64-17-5	ethanol					
	Acute fish toxicity	LC50 15400 mg/l	96 h	Lepomis macrochirus	Bulletin of Environmental Contamination	other: EPA-660/3-75-00 9, 1975
	Acute algae toxicity	ErC50 ca. 22000 mg/l	96 h	Pseudokirchneriella subcapitata	Ecotoxicology and Environmental Safety 7	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 10000 mg/l	48 h	Daphnia magna	Water Research 23(4): 495-499 (1989)	other: DIN 38412 Teil 11
	Algae toxicity	NOEC 5400 mg/l	5 d	Skeletonema costatum	Environ Toxicol Chem 8(5):451-455. (1989)	Study to determine the sensitivity of a
	Crustacea toxicity	NOEC 2 mg/l	10 d	Ceriodaphnia dubia	Arch Environ Contam Toxicol 20(2):211-21	Follows the basic methodology for the th
7601-90-3	perchloric acid					
	Acute fish toxicity	LC50 1470 mg/l	96 h	Lepomis macrochirus	Publication (2004)	EPA OPPTS 850.1075
	Acute algae toxicity	ErC50 > 435,7 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (1998)	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna	Study report (2004)	OECD Guideline 202
	Acute bacteria toxicity	EC50 > 1000 mg/l ( )	0,5 h	Activated sludge	Study report (1997)	ISO 8192
111-76-2	2-butoxyethanol					
	Acute fish toxicity	LC50 1474 mg/l	96 h	Oncorhynchus mykiss	Toxicol Mech Meth 12, 255-63 (2002)	OECD Guideline 203
	Acute algae toxicity	ErC50 911 mg/l	72 h	Pseudokirchneriella subcapitata	Toxicol Mech Meth 12, 255-63 (2002)	OECD Guideline 201
	Acute crustacea toxicity	EC50 1550 mg/l	48 h	Daphnia magna	Toxicol Mech Meth 12, 255-63 (2002)	OECD Guideline 202
	Fish toxicity	NOEC > 100 mg/l	21 d	Danio rerio	Toxicol Mech Meth 12, 255-63 (2002)	OECD Guideline 204
	Crustacea toxicity	NOEC 100 mg/l	21 d	Daphnia magna	Toxicol Mech Meth 12, 255-63 (2002)	OECD Guideline 211

## 12.2. Persistence and degradability

There are no data available on the mixture itself.

## 12.3. Bioaccumulative potential

There are no data available on the mixture itself.

## Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64-17-5	ethanol	-0,77
111-76-2	2-butoxyethanol	0,81

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**BCF**

CAS No	Chemical name	BCF	Species	Source
64-17-5	ethanol	1	Cyprinus carpio	Comparative Biochemi
7601-90-3	perchloric acid	> 0,12 - < 0,14	Danio rerio	Chemosphere 65 (2006)

**12.4. Mobility in soil**

There are no data available on the mixture itself.

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

Do not allow to enter into surface water or drains.

Avoid release to the environment.

**Further information**

There are no data available on the mixture itself.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

**SECTION 14: Transport information****Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	UN 3098
<b>14.2. UN proper shipping name:</b>	OXIDIZING LIQUID, CORROSIVE, N.O.S. (perchloric acid)
<b>14.3. Transport hazard class(es):</b>	5.1
<b>14.4. Packing group:</b>	II
Hazard label:	5.1+8
Classification code:	OC1
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Tunnel restriction code:	E

**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	UN 3098
<b>14.2. UN proper shipping name:</b>	OXIDIZING LIQUID, CORROSIVE, N.O.S. (perchloric acid)
<b>14.3. Transport hazard class(es):</b>	5.1
<b>14.4. Packing group:</b>	II

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**Elektrolyt-Lösung Ethanol vergällt 80 % (V/V) Ethylenglycolmonobutylether 10 % (V/V)  
Perchlorsäure..**

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Hazard label: 5.1+8  
Classification code: OC1  
Special Provisions: 274  
Limited quantity: 1 L  
Excepted quantity: E2

**Marine transport (IMDG)**

**14.1. UN number or ID number:** UN 3098  
**14.2. UN proper shipping name:** OXIDIZING LIQUID, CORROSIVE, N.O.S. (perchloric acid)  
**14.3. Transport hazard class(es):** 5.1  
**14.4. Packing group:** II  
Hazard label: 5.1+8  
Special Provisions: 274  
Limited quantity: 1 L  
Excepted quantity: E2  
EmS: F-A, S-Q

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

**14.1. UN number or ID number:** UN 3098  
**14.2. UN proper shipping name:** OXIDIZING LIQUID, CORROSIVE, N.O.S. (perchloric acid)  
**14.3. Transport hazard class(es):** 5.1  
**14.4. Packing group:** II  
Hazard label: 5.1+8  
Special Provisions: A3 A803  
Limited quantity Passenger: 0.5 L  
Passenger LQ: Y540  
Excepted quantity: E2  
IATA-packing instructions - Passenger: 550  
IATA-max. quantity - Passenger: 1 L  
IATA-packing instructions - Cargo: 554  
IATA-max. quantity - Cargo: 5 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):  
Entry 3, Entry 40, Entry 75

Information according to Directive 2012/18/EU (SEVESO III): P8 OXIDISING LIQUIDS AND SOLIDS

**National regulatory information**

Water hazard class (D): 1 - slightly hazardous to water

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 2,9,11,15.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**Elektrolyt-Lösung Ethanol vergällt 80 % (V/V) Ethylenglycolmonobutylether 10 % (V/V)  
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**Abbreviations and acronyms**

- Ox. Liq. 1: Oxidising liquids, hazard category 1
- Flam. Liq. 2: Flammable liquids, hazard category 2
- Acute Tox. 3: Acute toxicity, hazard category 3
- Skin Corr. 1A: Skin corrosion, sub-category 1A
- Skin Irrit. 2: Skin irritation, hazard category 2
- Eye Dam. 1: Serious eye damage, hazard category 1
- Eye Irrit. 2: Eye irritation, hazard category 2

**Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]**

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Ox. Liq. 2; H272	On basis of test data
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method

**Relevant H and EUH statements (number and full text)**

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H271 May cause fire or explosion; strong oxidiser.
- H272 May intensify fire; oxidiser.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.

**Further Information**

Provide appropriate information, instructions and training to users

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.

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

*(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*