

## Safety Data Sheet

according to UK REACH Regulation

### Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph. Eur., cha

Revision date: 28.03.2023

Product code: 25092

Page 1 of 14

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

##### 1.1. Product identifier

Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph. Eur., cha

UFI: T8G7-42VY-P00N-W091

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

###### Use of the substance/mixture

Laboratory chemical

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

###### 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	
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

inapplicable, this product is a mixture REACH registration number see section 3

#### SECTION 2: Hazards identification

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

###### GB CLP Regulation

Flam. Liq. 2; H225

Eye Irrit. 2; H319

STOT SE 3; H336

Full text of hazard statements: see SECTION 16.

##### 2.2. Label elements

###### GB CLP Regulation

###### Hazard components for labelling

propan-2-ol; isopropyl alcohol; isopropanol

Signal word: Danger

Pictograms:



## Safety Data Sheet

according to UK REACH Regulation

### Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph. Eur., cha

Revision date: 28.03.2023

Product code: 25092

Page 2 of 14

#### Hazard statements

H225	Highly flammable liquid and vapour.
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.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P403+P235	Store in a well-ventilated place. Keep cool.

#### 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol			40 - < 45 %
	200-661-7	603-117-00-0		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336			
64-17-5	ethanol			5 - < 10 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			
64-19-7	acetic acid			1 - < 5 %
	200-580-7	607-002-00-6	01-2119475328-30	
	Flam. Liq. 3, Skin Corr. 1A; H226 H314			

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

#### 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	5 - < 10 %
	inhalation: LC50 = 124,7 mg/l (vapours); oral: LD50 = 10470 mg/kg Eye Irrit. 2; H319: >= 50 - 100		
64-19-7	200-580-7	acetic acid	1 - < 5 %
	inhalation: LC50 = 11,4 mg/l (vapours); oral: LD50 = 3310 mg/kg Skin Corr. 1A; H314: >= 90 - 100 Skin Corr. 1B; H314: >= 25 - < 90 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25		

#### 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

## Safety Data Sheet

according to UK REACH Regulation

### Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph. Eur., cha

Revision date: 28.03.2023

Product code: 25092

Page 3 of 14

#### 4.1. Description of first aid measures

##### General information

No data available

##### After inhalation

Provide fresh air.

Call a doctor if you feel unwell.

##### After contact with skin

Wash immediately with: Water

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

##### After contact with eyes

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

Remove contact lenses, if present and easy to do. Continue rinsing.

##### After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

Irritant

Dizziness

The product causes narcotic-like effects.

Inebriation

Vomiting

#### 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

Water spray jet, Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder.

##### Unsuitable extinguishing media

no restriction

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

Combustible liquid.

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

Hazardous combustion products

In case of fire may be liberated: Carbon dioxide (CO<sub>2</sub>), Carbon monoxide

Beware of reignition.

#### 5.3. Advice for firefighters

Remove persons to safety. Do not inhale explosion and combustion gases.

Avoid contact with skin, eyes and clothes.

In case of fire: Wear self-contained breathing apparatus.

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

#### Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Suppress gases/vapours/mists with water spray jet.

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

## Safety Data Sheet

according to UK REACH Regulation

### Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph. Eur., cha

Revision date: 28.03.2023

Product code: 25092

Page 4 of 14

#### General advice

Keep away from sources of ignition - No smoking.

This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe).

Take action to prevent static discharges.

#### 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).

Collect in closed and suitable containers for disposal.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

##### 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.

#### 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 vapour/aerosol. 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

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

## Safety Data Sheet

according to UK REACH Regulation

### Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph. Eur., cha

Revision date: 28.03.2023

Product code: 25092

Page 5 of 14

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

#### Further information on handling

Take off immediately all contaminated clothing and wash it before reuse.  
If handled uncovered, arrangements with local exhaust ventilation have to be used.  
Draw up and observe skin protection programme.  
Wash hands and face before breaks and after work and take a shower if necessary.

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

##### Requirements for storage rooms and vessels

Keep container tightly closed. 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

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.  
national regulations

##### Further information on storage conditions

Vapours may form explosive mixtures with air.

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

Laboratory use Laboratory chemical

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
64-19-7	Acetic acid	10	25		TWA (8 h)	WEL
		20	50		STEL (15 min)	WEL
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
67-63-0	Propan-2-ol	400	999		TWA (8 h)	WEL
		500	1250		STEL (15 min)	WEL

**Safety Data Sheet**

according to UK REACH Regulation

**Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph. Eur., cha**

Revision date: 28.03.2023

Product code: 25092

Page 6 of 14

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol			
Worker DNEL, long-term		inhalation	systemic	500 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	888 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	89 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	319 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	26 mg/kg bw/day
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
64-19-7	acetic acid			
Worker DNEL, long-term		inhalation	local	25 mg/m <sup>3</sup>
Worker DNEL, acute		inhalation	local	25 mg/m <sup>3</sup>
Consumer DNEL, long-term		inhalation	local	25 mg/m <sup>3</sup>
Consumer DNEL, acute		inhalation	local	25 mg/m <sup>3</sup>

**Safety Data Sheet**

according to UK REACH Regulation

**Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph. Eur., cha**

Revision date: 28.03.2023

Product code: 25092

Page 7 of 14

**PNEC values**

CAS No	Substance	Value
Environmental compartment		Value
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	
Freshwater		140,9 mg/l
Freshwater (intermittent releases)		140,9 mg/l
Marine water		140,9 mg/l
Freshwater sediment		552 mg/kg
Marine sediment		552 mg/kg
Secondary poisoning		160 mg/kg
Micro-organisms in sewage treatment plants (STP)		2251 mg/l
Soil		28 mg/kg
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
64-19-7	acetic acid	
Freshwater		3,058 mg/l
Freshwater (intermittent releases)		30,58 mg/l
Marine water		0,306 mg/l
Freshwater sediment		11,36 mg/kg
Marine sediment		1,136 mg/kg
Micro-organisms in sewage treatment plants (STP)		85 mg/l
Soil		0,47 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**

Suitable eye protection: goggles.

**Hand protection**

Suitable examples are gloves of KCL GmbH, D-36124 Eichenzell, e-mail: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) with the following specification (test according to EN 374):

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

## Safety Data Sheet

according to UK REACH Regulation

### Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph. Eur., cha

Revision date: 28.03.2023

Product code: 25092

Page 8 of 14

By short-term hand contact  
Trade name/designation: KCL 720 Camapren®  
Suitable material: CR (polychloroprene, chloroprene rubber) 0,65 mm  
Wearing time with occasional contact (splashes): > 60 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

Flame-retardant protective clothing. Wear anti-static footwear and clothing

#### Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

#### Environmental exposure controls

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

## SECTION 9: Physical and chemical properties

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

Physical state:	Liquid	
Colour:	colourless	
Odour:	like: Alcohol	
Odour threshold:	No data available	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and boiling range:		>35 °C
Flammability:		not applicable not applicable
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		<21 °C
Auto-ignition temperature:		No data available
Decomposition temperature:		No data available
pH-Value:		3,7
Viscosity / kinematic:		No data available
Water solubility:		No data available
Solubility in other solvents		
No data available		
Partition coefficient n-octanol/water:		No data available
Vapour pressure:		No data available
Vapour pressure:		No data available
Density:		No data available
Bulk density:		No data available
Relative vapour density:		No data available

### 9.2. Other information

#### Information with regard to physical hazard classes



## Safety Data Sheet

according to UK REACH Regulation

### Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph. Eur., cha

Revision date: 28.03.2023

Product code: 25092

Page 9 of 14

#### Explosive properties

Vapours can form explosive mixtures with air.

Sustaining combustion:

Sustaining combustion

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

Not oxidising.

#### 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

No data available:

Viscosity / dynamic:

No data available

(at 20 °C)

Flow time:

No data available

#### Further Information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Vapours can form explosive mixtures with air.

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

Oxidising agent

### 10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

### 10.5. Incompatible materials

Rubber articles

Plastic articles

### 10.6. Hazardous decomposition products

Hazardous combustion products

In case of fire may be liberated: Carbon dioxide (CO<sub>2</sub>), Carbon monoxide

#### Further information

No data available

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in GB CLP Regulation

#### 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.

**Safety Data Sheet**

according to UK REACH Regulation

**Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph. Eur., cha**

Revision date: 28.03.2023

Product code: 25092

Page 10 of 14

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	
64-19-7	acetic acid					
	oral	LD50 3310 mg/kg	Rat	J Ind Hyg Toxicol, Vol 23, PP 78-82 (194)	The sodium salt of acetic acid was admin	
	inhalation (4 h) vapour	LC50 11,4 mg/l	Rat	Study report (1980)	OECD Guideline 403	

**Irritation and corrosivity**

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

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

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

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

**STOT-single exposure**

May cause drowsiness or dizziness. (propan-2-ol; isopropyl alcohol; isopropanol)

**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.

**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**

**Other information**

Irritant

Dizziness

The product causes narcotic-like effects.

Inebriation

Vomiting

**Further information**

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).

**SECTION 12: Ecological information**

**12.1. Toxicity**

There are no data available on the mixture itself.

**Safety Data Sheet**

according to UK REACH Regulation

**Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph. Eur., cha**

Revision date: 28.03.2023

Product code: 25092

Page 11 of 14

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol					
	Acute fish toxicity	LC50 mg/l	10000	96 h	Pimephales promelas	Publication (1983) OECD Guideline 203
64-17-5	ethanol					
	Acute fish toxicity	LC50 mg/l	15400	96 h	Lepomis macrochirus	Bulletin of Environmental Contamination other: EPA-660/3-75-009, 1975
	Acute algae toxicity	ErC50 mg/l	ca. 22000	96 h	Pseudokirchneriella subcapitata	Ecotoxicology and Environmental Safety 7 OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	> 10000	48 h	Daphnia magna	Water Research 23(4): 495-499 (1989) other: DIN 38412 Teil 11
	Algae toxicity	NOEC mg/l	5400	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
64-19-7	acetic acid					
	Acute fish toxicity	LC50 mg/l	> 1000	96 h	Oncorhynchus mykiss	Study report (2005) other: SOP E257
	Acute algae toxicity	ErC50 mg/l	> 1000	72 h	Skeletonema costatum	Study report (2005) ISO 10253
	Acute crustacea toxicity	EC50 mg/l	> 1000	48 h	Daphnia magna	Study report (1990) OECD Guideline 202

**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
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	0,05
64-17-5	ethanol	-0,77
64-19-7	acetic acid	-0,17

**BCF**

CAS No	Chemical name	BCF	Species	Source
64-17-5	ethanol	1	Cyprinus carpio	Comparative Biochemi
64-19-7	acetic acid	3,16	fish	Environ. Toxicol. Ch

**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 UK REACH.

There are no data available on the mixture itself.

## Safety Data Sheet

according to UK REACH Regulation

### Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph. Eur., cha

Revision date: 28.03.2023

Product code: 25092

Page 12 of 14

#### 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.

#### Further information

Avoid release to the environment.

### 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 allow to enter into surface water or drains.

##### Contaminated packaging

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

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

### SECTION 14: Transport information

#### Land transport (ADR/RID)

<b>14.1. UN number or ID number:</b>	UN 1993
<b>14.2. UN proper shipping name:</b>	FLAMMABLE LIQUID, N.O.S. (propan-2-ol, ethanol)
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3
Classification code:	F1
Special Provisions:	274 601 640D
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	33
Tunnel restriction code:	D/E

#### Inland waterways transport (ADN)

<b>14.1. UN number or ID number:</b>	UN 1993
<b>14.2. UN proper shipping name:</b>	FLAMMABLE LIQUID, N.O.S. (propan-2-ol, ethanol)
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3
Classification code:	F1
Special Provisions:	274 601 640D
Limited quantity:	1 L
Excepted quantity:	E2

#### Marine transport (IMDG)

<b>14.1. UN number or ID number:</b>	UN 1993
<b>14.2. UN proper shipping name:</b>	FLAMMABLE LIQUID, N.O.S. (propan-2-ol, ethanol)
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3
Special Provisions:	274

## Safety Data Sheet

according to UK REACH Regulation

**Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph.  
Eur., cha**

Revision date: 28.03.2023

Product code: 25092

Page 13 of 14

Limited quantity: 1 L  
Excepted quantity: E2  
EmS: F-E, S-E

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

**14.1. UN number or ID number:** UN 1993  
**14.2. UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (propan-2-ol, ethanol)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3  
Special Provisions: A3  
Limited quantity Passenger: 1 L  
Passenger LQ: Y341  
Excepted quantity: E2  
IATA-packing instructions - Passenger: 353  
IATA-max. quantity - Passenger: 5 L  
IATA-packing instructions - Cargo: 364  
IATA-max. quantity - Cargo: 60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: Combustible liquid.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**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

Information according to 2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS

**National regulatory information**

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

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

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

**SECTION 16: Other information****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)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

**Safety Data Sheet**

according to UK REACH Regulation

**Barium perchlorate solution 0.005 mol/l - 0.005 N solution in 2-propanol / water Reag. Ph. Eur., cha**

Revision date: 28.03.2023

Product code: 25092

Page 14 of 14

LD50: Lethal dose, 50%

**Classification for mixtures and used evaluation method according to GB CLP Regulation**

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Eye Irrit. 2; H319	Calculation method
STOT SE 3; H336	Calculation method

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

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

**Further Information**

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