



Safety Data Sheet

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

LEU Plan

Version number: 3.0
Replaces version of: 2015-09-11 (1)

Revision: 2020-09-22
First version: 2015-09-11

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

1.1 Product identifier

Trade name	<u>LEU Plan</u>
Registration number (REACH)	Not relevant (mixture).
CAS number	not relevant (mixture)

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

Relevant identified uses	Cleaning agent / Cleaner
Uses advised against	Do not use for squirting or spraying

1.3 Details of the supplier of the safety data sheet

Uniter Chemie GmbH Lötscher Weg 48 D-41334 Nettetal Germany	Telephone: ++49 (0) 2153 - 9789-0 Telefax: ++49 (0) 2153 - 9789-29 e-mail: info@uniter.com
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e-mail (competent person)	info@uniter.com
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National contact	++49 (0) 2153 - 9789 - 15
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1.4 Emergency telephone number

As above or nearest toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
2.16	substance or mixture corrosive to metals	1	Met. Corr. 1	H290
3.2	skin corrosion/irritation	1	Skin Corr. 1	H314
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318

For full text of abbreviations: see SECTION 16

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The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word danger

Pictograms

GHS05



Hazard statements

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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 [or 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.

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

Hazardous ingredients for labelling potassium hydroxide

2.3 Other hazards

There is no additional information.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances






Not relevant (mixture).

3.2 Mixtures


Description of the mixture

Aqueous solution.

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Hazardous ingredients						
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes	Specific Conc. Limits
2-butoxyethanol	CAS No 111-76-2 EC No 203-905-0 Index No 603-014-00-0 REACH Reg. No 01- 2119475108- 36-XXXX	10 – < 25	Acute Tox. 4 / H302 Acute Tox. 4 / H312 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319		GHS-HC IOELV	
tetrapotassium pyrophosphate	CAS No 7320-34-5 EC No 230-785-7 REACH Reg. No 01- 2119489369- 18-xxxx	1 – < 5	Eye Irrit. 2 / H319			
potassium hydroxide	CAS No 1310-58-3 EC No 215-181-3 Index No 019-002-00-8	1 – < 5	Met. Corr. 1 / H290 Acute Tox. 4 / H302 Skin Corr. 1A / H314 Eye Dam. 1 / H318	 	GHS-HC	Skin Corr. 1A; H314: C ≥ 5 % Skin Corr. 1B; H314: 2 % ≤ C < 5 % Skin Irrit. 2; H315: 0.5 % ≤ C < 2 % Eye Dam. 1; H318: C ≥ 2 % Eye Irrit. 2; H319: 0.5 % ≤ C < 2 %
alcohols, C12-14, ethoxylated, propoxylated	CAS No 68439-51-0 EC No Polymer	1 – < 5	Aquatic Chronic 3 / H412			
potassium 4-cumenesulfonate	CAS No 164524-02-1 REACH Reg. No 01- 2119489427- 24-xxxx	1 – < 5	Eye Irrit. 2 / H319			

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Hazardous ingredients						
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes	Specific Conc. Limits
sodium cumenesulphonate	CAS No 28348-53-0 EC No 248-983-7	1 – < 5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319			

Notes

GHS- Harmonised classification (the classification of the substance corresponds to the entry in the list according to

HC: 1272/2008/EC, Annex VI)

IOELV: Substance with a community indicative occupational exposure limit value

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Self-protection of the first aider.

Take off immediately all contaminated clothing.

In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following skin contact

After contact with skin, wash immediately with plenty of water.

Call a physician immediately. Causes poorly healing wounds.

Following eye contact

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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

Following ingestion

Rinse mouth immediately and drink plenty of water.

Do NOT induce vomiting.

Call a physician immediately.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Substance or mixture corrosive to metals.

Hazardous combustion products

carbon monoxide (CO), carbon dioxide (CO₂), phosphorus oxides (P_xO_y), sulphur oxides (SO_x)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

wear self-contained breathing apparatus

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Do not get in eyes, on skin, or on clothing.

Do not breathe vapour/spray.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to clean up a spill

Collect spillage.

Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation.

Do not get in eyes, on skin, or on clothing.

Do not breathe vapour/spray.

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Specific notes/details

None.

Handling of incompatible substances or mixtures

Do not mix with acids.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Corrosive conditions

Store in corrosive resistant container with a resistant inner liner.

Flammability hazards

None.

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Incompatible substances or mixtures

Store away from metals.

Store away from acids.

Incompatible materials: see section 10.

Protect against external exposure, such as

frost

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Keep container tightly closed and in a well-ventilated place.

Ventilation requirements

Provision of sufficient ventilation.

Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)									
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Notation	Source
EU	2-butoxyethanol	111-76-2	IOELV	20	98	50	246		2000/39/EC
GB	2-butoxyethanol	111-76-2	WEL	25	123	50	246		EH40/2005
GB	potassium hydroxide	1310-58-3	WEL				2		EH40/2005

Notation

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Biological limit values						
Country	Name of agent	Parameter	Notation	Identifier	Value	Source
GB	2-butoxyethanol	2-butoxyacetic acid	crea	BMGV	240 mmol/mol	EH40/2005

Notation

crea creatinine

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Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
2-butoxyethanol	111-76-2	DNEL	98 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
2-butoxyethanol	111-76-2	DNEL	125 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
2-butoxyethanol	111-76-2	DNEL	59 mg/m ³	human, inhalatory	consumer (private households)	chronic - systemic effects
2-butoxyethanol	111-76-2	DNEL	75 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
2-butoxyethanol	111-76-2	DNEL	6.3 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
tetrapotassium pyrophosphate	7320-34-5	DNEL	17.63 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
tetrapotassium pyrophosphate	7320-34-5	DNEL	4.35 mg/m ³	human, inhalatory	consumer (private households)	chronic - systemic effects
potassium hydroxide	1310-58-3	DNEL	1 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
potassium hydroxide	1310-58-3	DNEL	1 mg/m ³	human, inhalatory	consumer (private households)	chronic - local effects
potassium 4-cumenesulfonate	164524-02-1	DNEL	26.9 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
potassium 4-cumenesulfonate	164524-02-1	DNEL	136.3 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
potassium 4-cumenesulfonate	164524-02-1	DNEL	6.6 mg/m ³	human, inhalatory	consumer (private households)	chronic - systemic effects
potassium 4-cumenesulfonate	164524-02-1	DNEL	68.1 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
potassium 4-cumenesulfonate	164524-02-1	DNEL	3.8 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
sodium cumenesulphonate	28348-53-0	DNEL	4.02 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
sodium cumenesulphonate	28348-53-0	DNEL	4.02 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects

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Relevant DNELs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
sodium cumenesulphonate	28348-53-0	DNEL	32 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
sodium cumenesulphonate	28348-53-0	DNEL	1.98 mg/m ³	human, inhalatory	consumer (private households)	chronic - systemic effects
sodium cumenesulphonate	28348-53-0	DNEL	1.98 mg/m ³	human, inhalatory	consumer (private households)	chronic - local effects
sodium cumenesulphonate	28348-53-0	DNEL	16 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
sodium cumenesulphonate	28348-53-0	DNEL	1.14 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects

Relevant PNECs of components of the mixture				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
2-butoxyethanol	111-76-2	PNEC	8.8 mg/l	freshwater
2-butoxyethanol	111-76-2	PNEC	0.88 mg/l	marine water
2-butoxyethanol	111-76-2	PNEC	463 mg/l	sewage treatment plant (STP)
2-butoxyethanol	111-76-2	PNEC	34.6 mg/kg	freshwater sediment
2-butoxyethanol	111-76-2	PNEC	2.33 mg/kg	soil
2-butoxyethanol	111-76-2	PNEC	3.46 mg/kg	marine sediment
potassium 4-cumenesulfonate	164524-02-1	PNEC	0.23 mg/l	freshwater
potassium 4-cumenesulfonate	164524-02-1	PNEC	0.023 mg/l	marine water
potassium 4-cumenesulfonate	164524-02-1	PNEC	100 mg/l	sewage treatment plant (STP)
potassium 4-cumenesulfonate	164524-02-1	PNEC	0.862 mg/kg	freshwater sediment
potassium 4-cumenesulfonate	164524-02-1	PNEC	0.086 mg/kg	marine sediment
potassium 4-cumenesulfonate	164524-02-1	PNEC	0.037 mg/kg	soil
sodium cumenesulphonate	28348-53-0	PNEC	0.23 mg/l	freshwater
sodium cumenesulphonate	28348-53-0	PNEC	0.023 mg/l	marine water

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Relevant PNECs of components of the mixture				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
sodium cumenesulphonate	28348-53-0	PNEC	160 mg/l	sewage treatment plant (STP)
sodium cumenesulphonate	28348-53-0	PNEC	0.89 mg/kg	freshwater sediment
sodium cumenesulphonate	28348-53-0	PNEC	0.089 mg/kg	marine sediment
sodium cumenesulphonate	28348-53-0	PNEC	1.954 mg/kg	soil
2-butoxyethanol: PNEC Oral Secondary Poisoning 0,02 g/kg Food				

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
IIR: isobutene-isoprene (butyl) rubber	no information available	no information available

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

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.

Other protection measures

Protective clothing against liquid chemicals.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

P2 (filters at least 94 % of airborne particles, colour code: White).

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	Liquid
Form	Fluid
Colour	Blue
Odour	Pleasant
Odour threshold	These information are not available

Other safety parameters

pH (value)	14 (water: 10 ^{g/l} , 20 °C)
Melting point/freezing point	-5 °C
Initial boiling point and boiling range	105 °C
Flash point	Not applicable
Evaporation rate	These information are not available
Flammability (solid, gas)	Not relevant (fluid)

Explosive limits

Lower explosion limit (LEL)	1.1 vol% (CH ₃ (CH ₂) ₃ O(CH ₂) ₂ OH)
Upper explosion limit (UEL)	10.6 vol% (CH ₃ (CH ₂) ₃ O(CH ₂) ₂ OH)
Vapour pressure	These information are not available
Density	1.06 g/cm ³ at 20 °C
Vapour density	These information are not available
Relative density	These information are not available

Solubility(ies)

Water solubility Miscible in any proportion

Partition coefficient

n-octanol/water (log KOW)	These information are not available
Auto-ignition temperature	These information are not available
Relative self-ignition temperature for solids	Not relevant (Fluid)
Decomposition temperature	These information are not available

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Viscosity

Kinematic viscosity These information are not available

Dynamic viscosity These information are not available

Explosive properties Not explosive

Oxidising properties Shall not be classified as oxidising

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

Substance or mixture corrosive to metals.

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

Dangerous/dangerous reactions with Acids.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

acids, metals

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure

If not otherwise specified the classification is based on:
Ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.
Test data are not available for the complete mixture.

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Acute toxicity of components of the mixture							
Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
2-butoxyethanol	111-76-2	oral	LD50	1,414 mg/kg	guinea pig	OECD Guideline 401	ECHA
tetrapotassium pyrophosphate	7320-34-5	dermal	LD50	>2,000 mg/kg	rabbit	OECD Guideline 402	ECHA
potassium hydroxide	1310-58-3	oral	LD50	333 mg/kg	rat, male	OECD Guideline 425	ECHA
alcohols, C12-14, ethoxylated, propoxylated	68439-51-0	oral	LD50	>2,000 – <5,000 mg/kg	rat	OECD Guideline 401	manufacturer
alcohols, C12-14, ethoxylated, propoxylated	68439-51-0	dermal	LD50	>5,000 mg/kg	rat	OECD Guideline 402	manufacturer
potassium 4-cumenesulfonate	164524-02-1	oral	LD50	>7,000 mg/kg	rat	OECD Guideline 401	ECHA
potassium 4-cumenesulfonate	164524-02-1	dermal	LD0	>2,000 mg/kg	rabbit	OECD Guideline 402	ECHA
sodium cumenesulphonate	28348-53-0	oral	LD0	>7,000 mg/kg	rat	OECD Guideline 401	ECHA
sodium cumenesulphonate	28348-53-0	dermal	LD0	>2,000 mg/kg	rabbit	OECD Guideline 402	ECHA
sodium cumenesulphonate	28348-53-0	inhalation: dust/mist	LC0	>770 mg/l/4h	rat		ECHA

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Classification procedure

The classification is based on an extreme pH value.

Serious eye damage/eye irritation

Causes serious eye damage.

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Respiratory or skin sensitisation

Skin sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Test data are not available for the complete mixture.

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

Aquatic toxicity (acute) of components of the mixture

Aquatic toxicity (acute) of components of the mixture							
Name of substance	CAS No	Endpoint	Value	Species	Method	Source	Exposure time
2-butoxyethanol	111-76-2	LC50	1,474 mg/l	rainbow trout (Oncorhynchus mykiss)	OECD Guideline 203	ECHA	96 h

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Aquatic toxicity (acute) of components of the mixture							
Name of substance	CAS No	Endpoint	Value	Species	Method	Source	Exposure time
2-butoxyethanol	111-76-2	ErC50	>1,000 mg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	ECHA	72 h
2-butoxyethanol	111-76-2	EC50	1,550 mg/l	daphnia magna	OECD Guideline 202	ECHA	48 h
2-butoxyethanol	111-76-2	EbC50	623 mg/l	algae (Desmod-esmus subspicatus)	OECD Guideline 201	ECHA	72 h
tetrapotassium pyrophosphate	7320-34-5	LC50	>100 mg/l	rainbow trout (Oncorhynchus mykiss)	OECD Guideline 203	ECHA	96 h
tetrapotassium pyrophosphate	7320-34-5	EC50	>100 mg/l	daphnia magna	EPA OTS 797.1300	ECHA	48 h
tetrapotassium pyrophosphate	7320-34-5	ErC50	>100 mg/l	algae (Desmod-esmus subspicatus)	OECD Guideline 201	ECHA	72 h
alcohols, C12-14, ethoxylated, propoxylated	68439-51-0	LC50	>1 - <10 mg/l	orfe (Leuciscus idus)	DIN 38412 T.15	manufacturer	96 h
alcohols, C12-14, ethoxylated, propoxylated	68439-51-0	EC50	>1 - 10 mg/l	daphnia magna	OECD Guideline 202	manufacturer	24 h
alcohols, C12-14, ethoxylated, propoxylated	68439-51-0	EC50	>1 - 10 mg/l	algae (Desmod-esmus subspicatus)	OECD Guideline 201	manufacturer	72 h
potassium 4-cumenesulfonate	164524-02-1	LC50	>1,000 mg/l	rainbow trout (Oncorhynchus mykiss)	EPA OTS 797.1400	ECHA	96 h
potassium 4-cumenesulfonate	164524-02-1	EC50	≥230 mg/l	algae (pseudokirchneriella subcapitata)	EPA OTS 797.1050	ECHA	96 h
potassium 4-cumenesulfonate	164524-02-1	EC50	>1,000 mg/l	daphnia magna	EPA OTS 797.1300	ECHA	48 h
sodium cumenesulphonate	28348-53-0	LC50	>450 mg/l	fathead minnow (Pimephales promelas)	EPA OTS 797.1400	ECHA	96 h

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Aquatic toxicity (acute) of components of the mixture							
Name of substance	CAS No	Endpoint	Value	Species	Method	Source	Exposure time
sodium cumenesulphonate	28348-53-0	EC50	>450 mg/l	water flea (Daphnia)	EPA OTS 797.1300	ECHA	48 h

Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

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

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Method	Source	Exposure time
2-butoxyethanol	111-76-2	EC50	297 mg/l	daphnia magna	OECD Guideline 211	ECHA	21 d
2-butoxyethanol	111-76-2	NOEC	62.5 mg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	ECHA	72 h
2-butoxyethanol	111-76-2	NOEC	100 mg/l	daphnia magna	OECD Guideline 211	ECHA	21 d
2-butoxyethanol	111-76-2	growth (Eb-Cx) 10%	134 mg/l	daphnia magna	OECD Guideline 211	ECHA	21 d
2-butoxyethanol	111-76-2	growth (Eb-Cx) 10%	308 mg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	ECHA	72 h
2-butoxyethanol	111-76-2	growth rate (ErCx) 10%	679 mg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	ECHA	72 h
tetrapotassium pyrophosphate	7320-34-5	EC50	>1,000 mg/l	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA	3 h
tetrapotassium pyrophosphate	7320-34-5	NOEC	>100 mg/l	algae (Desmodesmus subspicatus)	OECD Guideline 201	ECHA	72 h

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Name of substance	CAS No	Endpoint	Value	Species	Method	Source	Exposure time
tetrapotassium pyrophosphate	7320-34-5	NOEC	1,000 mg/l	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA	3 h
alcohols, C12-14, ethoxylated, propoxylated	68439-51-0	EC10	>0.11 – 1 mg/l	algae (Desmodium subspicatus)	OECD Guideline 201	manufacturer	72 h
alcohols, C12-14, ethoxylated, propoxylated	68439-51-0	EC10	>0.1 – <10 mg/l	daphnia magna	OECD Guideline 211	manufacturer	21 d
potassium 4-cumenesulfonate	164524-02-1	NOEC	31 mg/l	algae (pseudokirchneriella subcapitata)	EPA OTS 797.1050	ECHA	72 h
potassium 4-cumenesulfonate	164524-02-1	growth (Eb-Cx) 10%	≥1,000 mg/l	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA	3 h

12.2 Persistence and degradability

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
2-butoxyethanol	111-76-2	carbon dioxide generation	90.4 %	28 d	OECD Guideline 301 B	ECHA
potassium 4-cumenesulfonate	164524-02-1	carbon dioxide generation	99.8 %	28 d	OECD Guideline 301 B	ECHA
sodium cumenesulphonate	28348-53-0	carbon dioxide generation	≥103 – ≤109 %	28 d	OECD Guideline 301 E	ECHA

Biodegradation

Test data are not available for the complete mixture.

Persistence

No data available.

12.3 Bioaccumulative potential

Test data are not available for the complete mixture.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW
2-butoxyethanol	111-76-2		0.81 (pH value: 7, 25 °C)
tetrapotassium pyrophosphate	7320-34-5		~-2
potassium hydroxide	1310-58-3		0.65 – 0.83 (20 °C)
potassium 4-cumenesulfonate	164524-02-1		-1.4 (pH value: 6, 22 °C)
sodium cumenesulphonate	28348-53-0	3.16	-1.5 (pH value: 7, 25 °C)

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects

Harmful effect on fish, plankton and other organisms due to pH shift possible.

The surfactant contained in this preparation complies with the biodegradability criteria as laid down in Regulation (EC) No 648/2004 on detergents.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): 2

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Completely emptied packages can be recycled.

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

Remarks

Please consider the relevant national or regional provisions.

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SECTION 14: Transport information

14.1	UN number	1814
14.2	UN proper shipping name	POTASSIUM HYDROXIDE SOLUTION
14.3	Transport hazard class(es)	
	Class	8
14.4	Packing group	III
14.5	Environmental hazards	-
14.6	Special precautions for user	-
14.7	Transport in bulk according to Annex II of MARPOL and the IBC Code	-

14.8 Information for each of the UN Model Regulations


Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

UN number	1814
Proper shipping name	UN1814, POTASSIUM HYDROXIDE SOLUTION, 8, III, (E)
Class	8
Classification code	C5
Packing group	III
Danger label(s)	8
A diamond-shaped hazard pictogram with a black background and a white border. It features a white silhouette of a person with a hand on their forehead, indicating a health hazard. The number '8' is printed in white at the bottom of the diamond.	
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	E
Hazard identification No	80
Emergency Action Code	2R


International Maritime Dangerous Goods Code (IMDG)

UN number	1814
Proper shipping name	UN1814, POTASSIUM HYDROXIDE SOLUTION, 8, III
Class	8

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Marine pollutant	-
Packing group	III
Danger label(s)	8
	
Special provisions (SP)	223
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-B
Stowage category	A
Segregation group	18 - Alkalis.

International Civil Aviation Organization (ICAO-IATA/DGR)

UN number	1814
Proper shipping name	UN1814, Potassium hydroxide solution, 8, III
Class	8
Packing group	III
Danger label(s)	8
	
Special provisions (SP)	A3
Excepted quantities (EQ)	E1
Limited quantities (LQ)	1 L

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Dangerous substances with restrictions (REACH, Annex XVII)			
Name of substance	Name acc. to inventory	CAS No	Restriction
LEU Plan	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		R3

Legend

R3 1. Shall not be used in:

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Legend

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
 - tricks and jokes,
 - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
2. Articles not complying with paragraph 1 shall not be placed on the market.
3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
- can be used as fuel in decorative oil lamps for supply to the general public, and,
 - present an aspiration hazard and are labelled with R65 or H304,
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
- (a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage';
 - (b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';
 - (c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.
7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

None of the ingredients are listed.

Seveso Directive

Not assigned.

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Regulation 648/2004/EC on detergents

Labelling of contents	
Wt%	Constituents
< 5 %	phosphates anionic surfactants non-ionic surfactants

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Water Framework Directive (WFD)

Not all ingredients are listed.

List of pollutants (WFD)				
Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
sodium cumenesulphonate	Metals and their compounds		A)	
2-butoxyethanol	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		A)	
tetrapotassium pyrophosphate	Substances which contribute to eutrophication (in particular, nitrates and phosphates)		A)	
tetrapotassium pyrophosphate	Metals and their compounds		A)	
potassium hydroxide	Metals and their compounds		A)	
potassium 4-cumenesulfonate	Metals and their compounds		A)	

Legend

A) Indicative list of the main pollutants

Regulation 98/2013/EU on the marketing and use of explosives precursors

None of the ingredients are listed.

Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)

None of the ingredients are listed.

Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)

None of the ingredients are listed.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier. Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

LEU Plan

Section	Former entry (text/value)	Actual entry (text/value)
1.3	<p>Details of the supplier of the safety data sheet: Uniter Chemie GmbH Ostring 16 D-44787 Bochum Germany</p> <p>Telephone: ++49 (0) 234 - 18487 Telefax: ++49 (0) 234 - 67175 e-mail: info@uniter.com</p>	<p>Details of the supplier of the safety data sheet: Uniter Chemie GmbH Lötscher Weg 48 D-41334 Nettetal Germany</p> <p>Telephone: ++49 (0) 2153 - 9789-0 Telefax: ++49 (0) 2153 - 9789-29 e-mail: info@uniter.com</p>
2.1		<p>Classification: change in the listing (table)</p>
2.1	<p>The most important adverse physicochemical, human health and environmental effects: Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.</p>	<p>The most important adverse physicochemical, human health and environmental effects: Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Spillage and fire water can cause pollution of watercourses.</p>
3.2		<p>Hazardous ingredients: change in the listing (table)</p>
8.1		<p>Relevant DNELs of components of the mixture: change in the listing (table)</p>
8.1		<p>Relevant PNECs of components of the mixture: change in the listing (table)</p>
14.1	<p>UN number: 3266</p>	<p>UN number: 1814</p>
14.2	<p>UN proper shipping name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.</p>	<p>UN proper shipping name: POTASSIUM HYDROXIDE SOLUTION</p>
14.2	<p>Technical name (hazardous ingredients): POTASSIUM HYDROXIDE</p>	
14.4	<p>Packing group: II</p>	<p>Packing group: III</p>
14.5	<p>Environmental hazards: non-environmentally hazardous acc. to the dangerous goods regulations</p>	<p>Environmental hazards: -</p>
14.6	<p>Special precautions for user: There is no additional information.</p>	<p>Special precautions for user: -</p>
14.7	<p>Transport in bulk according to Annex II of MARPOL and the IBC Code: The cargo is not intended to be carried in bulk.</p>	<p>Transport in bulk according to Annex II of MARPOL and the IBC Code: -</p>
14.8	<p>UN number: 3266</p>	<p>UN number: 1814</p>
14.8	<p>Proper shipping name: UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S., (contains: POTASSIUM HYDROXIDE), 8, II, (E)</p>	<p>Proper shipping name: UN1814, POTASSIUM HYDROXIDE SOLUTION, 8, III, (E)</p>

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Section	Former entry (text/value)	Actual entry (text/value)
14.8	Packing group: II	Packing group: III
14.8	Special provisions (SP): 274	
14.8	Excepted quantities (EQ): E2	Excepted quantities (EQ): E1
14.8	Limited quantities (LQ): 1 L	Limited quantities (LQ): 5 L
14.8	Transport category (TC): 2.	Transport category (TC): 3
14.8	Emergency Action Code: 2X	Emergency Action Code: 2R
14.8	UN number: 3266	UN number: 1814
14.8	Proper shipping name: UN3266, CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S., (contains: POTASSIUM HYDROXIDE), 8, II	Proper shipping name: UN1814, POTASSIUM HYDROXIDE SOLUTION, 8, III
14.8	Packing group: II	Packing group: III
14.8	Special provisions (SP): 274	Special provisions (SP): 223
14.8	Excepted quantities (EQ): E2	Excepted quantities (EQ): E1
14.8	Limited quantities (LQ): 1 L	Limited quantities (LQ): 5 L
14.8	Stowage category: B	Stowage category: A
14.8	UN number: 3266	UN number: 1814
14.8	Proper shipping name: UN3266, Corrosive liquid, basic, inorganic, n.o.s., (contains: POTASSIUM HYDROXIDE), 8, II	Proper shipping name: UN1814, Potassium hydroxide solution, 8, III
14.8	Packing group: II	Packing group: III
14.8	Excepted quantities (EQ): E2	Excepted quantities (EQ): E1
14.8	Limited quantities (LQ): 0,5 L	Limited quantities (LQ): 1 L

LEU Plan

Abbreviations and acronyms

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EbC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)

LEU Plan

Abbreviations and acronyms	
Abbr.	Descriptions of used abbreviations
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	Indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
Met. Corr.	Substance or mixture corrosive to metals
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
SVHC	Substance of Very High Concern
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.
Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

LEU Plan

Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

List of relevant phrases (code and full text as stated in chapter 2 and 3)	
Code	Text
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H412	Harmful to aquatic life with long lasting effects.

Responsible for the safety data sheet

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Disclaimer

This information is based upon the present state of our knowledge.

This SDS has been compiled and is solely intended for this product.