Safety Data Sheet

acc. to The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)

MB ActiveCube

Version number: 12.0
Replaces version of: 2026-08-07 (11)

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

1.1 Product identifier

Trade name **MB ActiveCube**

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

Relevant identified uses WC bowl stones for urinals

1.3 Details of the supplier of the safety data sheet

URIMAT Schweiz AG
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CH-8634 Hombrechtikon
Switzerland

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Website: www.urimat.ch

e-mail (competent person) sdb@csb-online.de

Please do not use this e-mail address to ask for the latest safety data sheet. For this purpose contact URIMAT Schweiz AG.

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 (acc. to GB CLP)

This mixture does not meet the criteria for classification: "Causes serious eye damage"
Expert judgement: AISE - DetNet (Classification logging number DetNet/148 und DetNet/149)

Classification

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.4S	skin sensitisation	1	Skin Sens. 1	H317
4.1C	hazardous to the aquatic environment - chronic hazard	3	Aquatic Chronic 3	H412

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling (acc. to GB CLP)

Signal word warning

Pictograms

GHS07



Hazard statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.

Hazardous ingredients for labelling

limonene
4-tert-butylcyclohexyl acetate
linalool
subtilisin

Additional labelling requirements see section 15 of the safety data sheet

2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0,1%.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Hazardous ingredients

Name of substance	Identifier	Wt%	Classification acc. to GHS	Notes
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	CAS No 68411-30-3 EC No 270-115-0	30 – < 50	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Aquatic Chronic 3 / H412	-
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	CAS No 90622-77-8 EC No 292-481-0	2.5 – < 5	Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Aquatic Chronic 2 / H411	-
C16-18 alcohols, ethoxylated	CAS No 68439-49-6 EC No 953-760-9	1 – 2.5	Eye Irrit. 2 / H319	-
limonene	CAS No 138-86-3 EC No 205-341-0 Index No 601-029-00-7	1 – < 2.5	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Skin Sens. 1 / H317 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	C
4-tert-butylcyclohexyl acetate	CAS No 32210-23-4 EC No 250-954-9	0.5 – < 1	Skin Sens. 1B / H317	-
subtilisin	CAS No 9014-01-1 EC No 232-752-2 Index No 647-012-00-8	0.5 – < 1	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Resp. Sens. 1 / H334 STOT SE 3 / H335 Aquatic Acute 1 / H400 Aquatic Chronic 2 / H411	-
linalool	CAS No 78-70-6 EC No 201-134-4 Index No 603-235-00-2	0.1 – < 0.5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1B / H317	-

Notes

C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Name of substance	Specific Conc. Limits	M-Factors	ATE	Exposure route
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	-	-	1,080 $^{mg}/_{kg}$	oral
limonene	-	M-factor (acute) = 1 M-factor (chronic) = 1	-	-
subtilisin	-	M-factor (acute) = 1	1,728 $^{mg}/_{kg}$	oral

Remarks

For full text of H-phrases: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Self-protection of the first aider.
Remove affected person from the danger area and lay down.
Do not leave affected person unattended.
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.

Following skin contact

Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.

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.
If eye irritation persists: Get medical advice/attention.

Following ingestion

Rinse mouth. Do not induce vomiting.
Get medical advice/attention if you feel unwell.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

This information is not available.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings

5.2 Special hazards arising from the substance or mixture

Deposited combustible dust has considerable explosion potential.

Hazardous combustion products

carbon monoxide (CO), carbon dioxide (CO_2), sulphur oxides (SO_x), hydrogen chloride (HCl)

5.3 Advice for firefighters

Keep containers cool with water spray.
In case of fire and/or explosion do not breathe fumes.
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

Self-contained breathing apparatus (SCBA)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.
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 contain a spill

Covering of drains.
Take up mechanically.

Advice on how to clean up a spill

Take up mechanically.

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

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

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.
Removal of dust deposits.

Measures to protect the environment

Avoid release to the environment.
Do not empty into drains; dispose of this material and its container at hazardous or special waste collection point.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.
Wash hands after use.
Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

humidity

Consideration of other advice

Ventilation requirements

Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Keep container tightly closed.
Store in a dry place.
Store in corrosive resistant container with a resistant inner liner.

Packaging compatibilities

Keep only in original container.

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/m³]	STEL [ppm]	STEL [mg/m³]	Notation	Source
GB	dust	-	WEL	-	10	-	-	i	EH40/2005
GB	dust	-	WEL	-	4	-	-	r	EH40/2005
GB	subtilisin (bacillus subtilis carlsberg)	9014-01-1	WEL	-	0.00004	-	-	-	EH40/2005

Notation

i	inhalable fraction
r	respirable fraction
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)

Human health values

Relevant DNELs of components

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	DNEL	7.6 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	DNEL	119 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	90622-77-8	DNEL	73.4 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	90622-77-8	DNEL	4.16 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
amides, C12-18(even-numbered) and	90622-77-8	DNEL	93.6 µg/cm²	human, dermal	worker (industry)	chronic - local effects

Relevant DNELs of components

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
C18(unsatd.), N-hydroxyethyl						
4-tert-butylcyclohexyl acetate	32210-23-4	DNEL	4.93 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
4-tert-butylcyclohexyl acetate	32210-23-4	DNEL	1.4 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
linalool	78-70-6	DNEL	24.58 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
linalool	78-70-6	DNEL	3.5 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Environmental values

Relevant PNECs of components

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	PNEC	0.268 $^{mg}/_{l}$	freshwater
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	PNEC	0.027 $^{mg}/_{l}$	marine water
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	PNEC	3.43 $^{mg}/_{l}$	sewage treatment plant (STP)
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	PNEC	8.1 $^{mg}/_{kg}$	freshwater sediment
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	PNEC	6.8 $^{mg}/_{kg}$	marine sediment
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	PNEC	35 $^{mg}/_{kg}$	soil
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	90622-77-8	PNEC	0.007 $^{mg}/_{l}$	freshwater
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	90622-77-8	PNEC	0.001 $^{mg}/_{l}$	marine water
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	90622-77-8	PNEC	830 $^{mg}/_{l}$	sewage treatment plant (STP)
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	90622-77-8	PNEC	1.201 $^{mg}/_{kg}$	freshwater sediment

Relevant PNECs of components				
Name of substance	**CAS No**	**Endpoint**	**Threshold level**	**Environmental compartment**
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	90622-77-8	PNEC	0.12 mg/kg	marine sediment
4-tert-butylcyclohexyl acetate	32210-23-4	PNEC	5.3 µg/l	freshwater
4-tert-butylcyclohexyl acetate	32210-23-4	PNEC	0.53 µg/l	marine water
4-tert-butylcyclohexyl acetate	32210-23-4	PNEC	12.2 mg/l	sewage treatment plant (STP)
4-tert-butylcyclohexyl acetate	32210-23-4	PNEC	2.01 mg/kg	freshwater sediment
4-tert-butylcyclohexyl acetate	32210-23-4	PNEC	0.21 mg/kg	marine sediment
4-tert-butylcyclohexyl acetate	32210-23-4	PNEC	0.42 mg/kg	soil
subtilisin	9014-01-1	PNEC	1.7 µg/l	freshwater
subtilisin	9014-01-1	PNEC	0.17 µg/l	marine water
subtilisin	9014-01-1	PNEC	65,000 µg/l	sewage treatment plant (STP)
subtilisin	9014-01-1	PNEC	568 µg/kg	soil
linalool	78-70-6	PNEC	0.2 mg/l	freshwater
linalool	78-70-6	PNEC	0.02 mg/l	marine water
linalool	78-70-6	PNEC	10 mg/l	sewage treatment plant (STP)
linalool	78-70-6	PNEC	2.22 mg/kg	freshwater sediment
linalool	78-70-6	PNEC	0.222 mg/kg	marine sediment
linalool	78-70-6	PNEC	0.327 mg/kg	soil
4-tert-butylcyclohexyl acetate: PNEC Oral Secondary Poisoning 66,67 mg/kg Food				

8.2 Exposure controls

Appropriate engineering controls

Use local and general ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

fill and mix: Wear eye glasses with side protection according to EN 166.

Hand protection

fill and mix: Wear suitable gloves.
Chemical protection gloves are suitable, which are tested according to EN 374.
Check leak-tightness/impermeability prior to use.
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.

Body protection

fill and mix: Protective clothing for use against solid particulates.
(EN 13832, EN 340, EN 13034, EN 14605).

Respiratory protection

In case of inadequate ventilation wear respiratory protection.
Particle filter device (DIN EN 143).

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

Physical state	solid
Colour	blue
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	>400 °C
Flammability	non-combustible
Lower and upper explosion limit	not applicable (solid)
Flash point	not applicable
Auto-ignition temperature	not applicable (solid)
Decomposition temperature	not relevant
pH (value)	7 – 8
Viscosity	not relevant (solid)
Solubility(ies)	
Water solubility	not determined
Partition coefficient n-octanol/water (log value)	not determined
Vapour pressure	not determined
Density and/or relative density	
Density	not determined
Relative vapour density	not relevant (solid)

Particle characteristics	no data available

9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics	
Water content (moisture)	1.1 %
Liquid (organic) solvents content	1.1 %
Solid content	94 %

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

10.4 Conditions to avoid

Control of dust.

10.5 Incompatible materials

oxidisers

10.6 Hazardous decomposition products

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

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 acc. to GHS

Acute toxicity

Test data are not available for the complete mixture.

Acute toxicity of components

Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	oral	LD50	1,080 mg/kg	rat	OECD Guideline 401	ECHA
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	dermal	LD0	>2,000 mg/kg	rat	OECD Guideline 402	ECHA
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	90622-77-8	oral	LD50	>2,000 mg/kg	rat	-	ECHA
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	90622-77-8	dermal	LD50	>2,000 mg/kg	rabbit	-	ECHA
limonene	138-86-3	oral	LD50	5,300 mg/kg	rat	-	Food and Cosmetics Toxicology., 12(703), 1974
limonene	138-86-3	dermal	LD50	>5,000 mg/kg	rabbit	-	Food and Cosmetics Toxicology. Vol. 13, Pg. 825, 1975
4-tert-butylcyclohexyl acetate	32210-23-4	oral	LD50	3,370 mg/kg	rat	OECD Guideline 401	ECHA
4-tert-butylcyclohexyl acetate	32210-23-4	dermal	LD50	>4,680 mg/kg	rabbit	OECD Guideline 402	ECHA
subtilisin	9014-01-1	oral	LD50	1,728 mg/kg	rat	OECD Guideline 401	ECHA Chem
linalool	78-70-6	dermal	LD50	5,610 mg/kg	rabbit	OECD Guideline 402	ECHA
linalool	78-70-6	oral	LD50	2,790 mg/kg	rat	OECD Guideline 401	ECHA Chem

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation
Skin sensitisation

May cause an allergic skin reaction.

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.

11.2 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

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

Aquatic toxicity (acute) of components

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	LC50	96 h	1.67 $^{mg}/_{l}$	bluegill (Lepomis macrochirus)	EPA OPPTS 850.1075	ECHA Chem
benzenesulfonic acid, C10-13-	68411-30-3	LC50	96 h	3.94 $^{mg}/_{l}$	daphnia magna	OECD Guideline	ECHA Chem

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
alkyl derivs., sodium salts						211	
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	EC50	48 h	2.9 mg/l	daphnia magna	OECD Guideline 202	ECHA Chem
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	EC50	96 h	29 mg/l	algae (raphidocelis subcapitata)	-	ECHA
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	ErC50	72 h	235 mg/l	algae (raphidocelis subcapitata)	-	ECHA
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	90622-77-8	EC50	24 h	37.5 mg/l	daphnia magna	-	-
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	90622-77-8	EbC50	72 h	1.1 mg/l	algae (Desmodesmus subspicatus)	-	-
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	90622-77-8	ErC50	72 h	8.7 mg/l	algae (Desmodesmus subspicatus)	-	-
limonene	138-86-3	EC50	48 h	17 mg/l	aquatic invertebrates	-	Environmental Fate and Effects Division, U.S.EPA
limonene	138-86-3	LC50	96 h	38.5 mg/l	fathead minnow (Pimephales promelas)	-	Concise International Chemical Assessment Documents Number 5: Limonene p.16 (1998)
4-tert-butylcyclohexyl acetate	32210-23-4	LC50	96 h	8.6 mg/l	common carp (Cyprinus carpio)	EU method C.1	ECHA Chem
4-tert-butylcyclohexyl acetate	32210-23-4	EC50	48 h	5.3 mg/l	daphnia magna	OECD Guideline	ECHA Chem

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
						202	
4-tert-butylcyclohexyl acetate	32210-23-4	ErC50	72 h	22 mg/l	green algae (Desmodesmus subspicatus)	EU method C.3	ECHA
subtilisin	9014-01-1	EC50	48 h	0.327 mg/l	daphnia magna	OECD Guideline 202	ECHA Chem
subtilisin	9014-01-1	ErC50	72 h	830 µg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	ECHA
subtilisin	9014-01-1	EbC50	72 h	290 µg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	ECHA
subtilisin	9014-01-1	NOEC	48 h	0.071 mg/l	daphnia magna	OECD Guideline 202	ECHA Chem
linalool	78-70-6	LC50	96 h	27.8 mg/l	rainbow trout (Oncorhynchus mykiss)	OECD Guideline 203	ECHA Chem
linalool	78-70-6	EC50	48 h	59 mg/l	daphnia magna	OECD Guideline 202	ECHA Chem
linalool	78-70-6	ErC50	96 h	156.7 mg/l	algae (Desmodesmus subspicatus)	DIN 38412 L 9	ECHA
linalool	78-70-6	EbC50	96 h	88.3 mg/l	algae (Desmodesmus subspicatus)	DIN 38412 T.9 stat	ECHA
linalool	78-70-6	NOEC	96 h	<3.5 mg/l	rainbow trout (Oncorhynchus mykiss)	OECD Guideline 203	ECHA Chem
linalool	78-70-6	NOEC	48 h	25 mg/l	daphnia magna	OECD Guideline 202	ECHA Chem

Aquatic toxicity (chronic)

Harmful to aquatic life with long lasting effects.

Aquatic toxicity (chronic) of components

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	NOEC	96 h	0.5 $^{mg}/_{l}$	algae (raphidocelis subcapitata)	-	ECHA
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	LOEC	96 h	1 $^{mg}/_{l}$	algae (raphidocelis subcapitata)	-	ECHA
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	growth rate (ErCx) 10%	72 h	13.1 $^{mg}/_{l}$	algae (raphidocelis subcapitata)	-	ECHA
4-tert-butylcyclohexyl acetate	32210-23-4	EC50	21 d	5.142 $^{mg}/_{l}$	daphnia magna	OECD Guideline 211	ECHA Chem
4-tert-butylcyclohexyl acetate	32210-23-4	EC50	30 d	5.727 $^{mg}/_{l}$	zebra fish (Danio rerio)	OECD Guideline 210	ECHA Chem
4-tert-butylcyclohexyl acetate	32210-23-4	EC50	3 h	302 $^{mg}/_{l}$	microorganisms	EU method C.11	ECHA Chem
4-tert-butylcyclohexyl acetate	32210-23-4	NOEC	30 d	2.04 $^{mg}/_{l}$	zebra fish (Danio rerio)	OECD Guideline 210	ECHA Chem
4-tert-butylcyclohexyl acetate	32210-23-4	NOEC	21 d	4.44 $^{mg}/_{l}$	daphnia magna	OECD Guideline 211	ECHA Chem
4-tert-butylcyclohexyl acetate	32210-23-4	NOEC	72 h	6.8 $^{mg}/_{l}$	green algae (Desmodesmus subspicatus)	EU method C.3	ECHA Chem
4-tert-butylcyclohexyl acetate	32210-23-4	LOEC	30 d	1.2 $^{mg}/_{l}$	zebra fish (Danio rerio)	OECD Guideline 210	ECHA Chem
4-tert-butylcyclohexyl acetate	32210-23-4	LOEC	21 d	2.96 $^{mg}/_{l}$	daphnia magna	OECD Guideline 211	ECHA Chem
4-tert-butylcyclohexyl acetate	32210-23-4	growth (EbCx) 10%	30 d	1.352 $^{mg}/_{l}$	zebra fish (Danio rerio)	OECD Guideline 210	ECHA Chem
4-tert-butylcyclohexyl acetate	32210-23-4	growth (EbCx) 10%	21 d	2.892 $^{mg}/_{l}$	daphnia magna	OECD Guideline 211	ECHA Chem
4-tert-butylcyclohexyl acetate	32210-23-4	growth (EbCx) 20%	30 d	1.682 $^{mg}/_{l}$	zebra fish (Danio rerio)	OECD Guideline	ECHA Chem

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
						210	
4-tert-butylcyclohexyl acetate	32210-23-4	growth (EbCx) 10%	21 d	2.302 mg/l	daphnia magna	OECD Guideline 211	ECHA Chem
4-tert-butylcyclohexyl acetate	32210-23-4	growth (EbCx) 20%	21 d	3.097 mg/l	daphnia magna	OECD Guideline 211	ECHA Chem
4-tert-butylcyclohexyl acetate	32210-23-4	growth (EbCx) 10%	3 h	122 mg/l	microorganisms	-	ECHA Chem
4-tert-butylcyclohexyl acetate	32210-23-4	growth rate (ErCx) 10%	72 d	11 mg/l	green algae (Desmodesmus subspicatus)	EU method C.3	ECHA Chem
subtilisin	9014-01-1	EC50	32 d	0.74 mg/l	fathead minnow (Pimephales promelas)	OECD Guideline 210	ECHA Chem
subtilisin	9014-01-1	EC50	21 d	>1.14 mg/l	daphnia magna	OECD Guideline 211	ECHA Chem
subtilisin	9014-01-1	EC10	32 d	0.063 mg/l	fathead minnow (Pimephales promelas)	OECD Guideline 210	ECHA Chem
subtilisin	9014-01-1	NOEC	32 d	0.042 mg/l	fathead minnow (Pimephales promelas)	OECD Guideline 210	ECHA
subtilisin	9014-01-1	NOEC	32 d	0.15 mg/l	fathead minnow (Pimephales promelas)	OECD Guideline 210	ECHA Chem
subtilisin	9014-01-1	NOEC	21 h	1.14 mg/l	daphnia magna	OECD Guideline 211	ECHA Chem
subtilisin	9014-01-1	LOEC	32 d	0.44 mg/l	fathead minnow (Pimephales promelas)	OECD Guideline 210	ECHA Chem
subtilisin	9014-01-1	reproductive output 10%	21 d	0.145 mg/l	daphnia magna	OECD Guideline 211	ECHA
subtilisin	9014-01-1	reproductive output 20%	21 d	0.292 mg/l	daphnia magna	OECD Guideline 211	ECHA

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
subtilisin	9014-01-1	reproductive output 10%	14 d	0.052 $^{mg}/_{l}$	daphnia magna	OECD Guideline 211	ECHA
linalool	78-70-6	EC50	30 min	>100 $^{mg}/_{l}$	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA
linalool	78-70-6	EC50	3 h	>100 $^{mg}/_{l}$	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA
linalool	78-70-6	growth (EbCx) 10%	96 h	38.4 $^{mg}/_{l}$	algae (Desmodesmus subspicatus)	DIN 38412 T.9 stat	ECHA
linalool	78-70-6	growth (EbCx) 10%	3 h	>100 $^{mg}/_{l}$	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA
linalool	78-70-6	growth rate (ErCx) 10%	96 h	54.3 $^{mg}/_{l}$	algae (Desmodesmus subspicatus)	DIN 38412 T.9 stat	ECHA

12.2 Persistence and degradability

Biodegradation

Test data are not available for the complete mixture.

Degradability of components

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	carbon dioxide generation	85 %	29 d	OECD Guideline 301 B	ECHA
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	90622-77-8	oxygen depletion	74 – 82 %	30 d	-	-
limonene	138-86-3	oxygen depletion	73 %	14 d	OECD 301 C	NITE (2015)
4-tert-butylcyclohexyl	32210-23-4	carbon dioxide generation	75 %	29 d	EU method C.4-C	ECHA

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
acetate						
subtilisin	9014-01-1	carbon dioxide generation	100 %	29 d	OECD Guideline 301 B	ECHA
subtilisin	9014-01-1	carbon dioxide generation	60 %	7 d	OECD Guideline 301 B	ECHA
linalool	78-70-6	oxygen depletion	64.2 %	28 d	OECD Guideline 301 D	ECHA

Persistence

No data available.

12.3 Bioaccumulative potential

Bioaccumulative potential of components

Name of substance	CAS No	BCF	Log KOW
benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	≥2 – ≤1,000	1.4 (pH value: 6.1, 23 °C)
amides, C12-18(even-numbered) and C18(unsatd.), N-hydroxyethyl	90622-77-8	56.8	4.3 (25 °C)
limonene	138-86-3	-	4.5 (25 °C)
4-tert-butylcyclohexyl acetate	32210-23-4	234	4.8 (25 °C)
subtilisin	9014-01-1	-	-3.1 (pH value: 9.2, 25 °C)
linalool	78-70-6	-	2.9 (pH value: 7, 20 °C)

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0,1%.

12.6 Other adverse effects

Data are not available.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): 2.
Keep away from drains, surface and ground water.

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.

SECTION 14: Transport information

14.1	**UN number**	not subject to transport regulations
14.2	**UN proper shipping name**	-
14.3	**Transport hazard class(es)**	-
14.4	**Packing group**	-
14.5	**Environmental hazards**	-
14.6	**Special precautions for user**	-
14.7	**Maritime transport in bulk according to IMO instruments**	-

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)

Seveso Directive

Not assigned.

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

None of the ingredients are listed.

Regulation 648/2004/EC on detergents

Labelling of contents	
Wt%	**Constituents**
≥30%	anionic surfactants

Labelling of contents	
Wt%	**Constituents**
< 5 %	amphoteric surfactants non-ionic surfactants
-	enzymes (subtilisin) perfumes (LIMONENE, TERPINEOL, LINALOOL, CAMPHOR, COUMARINE)

Regulation on the marketing and use of explosives precursors

None of the ingredients are listed.

Regulation on drug precursors

None of the ingredients are listed.

Regulation on substances that deplete the ozone layer (ODS)

None of the ingredients are listed.

Regulation concerning the export and import of hazardous chemicals (PIC)

None of the ingredients are listed.

Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

Restrictions of occupation

Directive 94/33/EC on the protection of young people at work / Observe national regulations on protection of young people at work.

National regulations (GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

None of the ingredients are listed.

Restrictions according to GB REACH, Annex 17

Dangerous substances with restrictions (GB REACH, Annex 17)			
Name of substance	**Name acc. to inventory**	**CAS No**	**Conditions of restriction**
limonene	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	-	R3
limonene	flammable / pyrophoric	-	R40
4-tert-butylcyclohexyl acetate	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	-	R3
linalool	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	-	R3

Legend

R3 1. Shall not be used in:
— 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 British Standard Specification on Decorative oil lamps (BS EN 14059) adopted by the British Standards Institute.
5. Without prejudice to the implementation of other legislation 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.

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 Agency.

R40 1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:
— metallic glitter intended mainly for decoration,
— artificial snow and frost,
— 'whoopee' cushions,
— silly string aerosols,
— imitation excrement,
— horns for parties,
— decorative flakes and foams,
— artificial cobwebs,
— stink bombs.
2. Without prejudice to the application of other legislation on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:
'For professional users only'.
3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/324/EEC (***).
4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.
(***) OJ L 147, 9.6.1975, p. 40.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)
2.2	Hazardous ingredients for labelling: limonene subtilisin linalool	Hazardous ingredients for labelling: limonene 4-tert-butylcyclohexyl acetate linalool subtilisin
3.2	-	Hazardous ingredients: change in the listing (table)
8.1	-	Relevant DNELs of components: change in the listing (table)
8.1	-	Relevant PNECs of components: change in the listing (table)
11.2	Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.	-
15.1	-	Labelling of contents: change in the listing (table)
15.1	-	Dangerous substances with restrictions (GB REACH, Annex 17): change in the listing (table)

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
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

Abbr.	Descriptions of used abbreviations
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
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
Flam. Liq.	Flammable liquid
GB CLP	The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended)
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
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)
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
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD0	Lethal dose 0%: LD0 is the dose of a tested substance that causes no deaths in the test population.
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LOEC	Lowest Observed Effect Concentration
log KOW	n-Octanol/water
M-factor	Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present
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
Resp. Sens.	Respiratory sensitisation

Abbr.	Descriptions of used abbreviations
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
Skin Sens.	Skin sensitisation
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
TWA	Time-weighted average
UN	United Nations
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended).
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended).
GB mandatory classification and labelling.
Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).
Regulations concerning the International Carriage of Dangerous Goods by Rail (RID).
International Maritime Dangerous Goods Code (IMDG).
Dangerous Goods Regulations (DGR) for the air transport (IATA).

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 section 2 and 3)

Code	Text
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.

Code	Text
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
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.