Safety Data Sheet

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

VireXbuster® Spray

Version number: 3.0
Replaces version of: 2022-03-26 (2)

Revision: 2022-09-09

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

1.1 Product identifier

Trade name	**VireXbuster® Spray**
Registration number (REACH)	Not relevant (mixture)
Unique formula identifier (UFI)	7AYV-50ES-S0DY-627U
Article number	100102

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

Relevant identified uses	Antibacterial Antiviral Coating Professional use Consumer use

1.3 Details of the supplier of the safety data sheet

DaXem GmbH
Steigerwaldweg 12
65760 Eschborn
Germany

Telephone: 06196/5232707

e-mail (competent person) ebrega@daxem.de (Enrico Brega)

1.4 Emergency telephone number

Poison centre

Country	Name	Telephone
Germany	Giftnotruf der Charité - Universitätsmedizin Berlin	+49 30 30 686 700 (24/7)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Section	Hazard class	Category	Hazard class and category	Hazard state-ment
2.3	aerosols	1	Aerosol 1	H222,H229
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.4S	skin sensitisation	1	Skin Sens. 1	H317
3.8D	specific target organ toxicity - single exposure (narcotic effects, drowsiness)	3	STOT SE 3	H336
4.1C	hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

For full text of H-phrases: see SECTION 16

Code	Supplemental hazard information
EUH066	repeated exposure may cause skin dryness or cracking
EUH401	to avoid risks to human health and the environment, comply with the instructions for use

The most important adverse physicochemical, human health and environmental effects

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

GHS02, GHS07, GHS09

- hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

- precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

- supplemental hazard information

EUH066	Repeated exposure may cause skin dryness or cracking.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

- hazardous ingredients for labelling

Contains: octhilinone; n-butyl acetate; acetic acid n-butyl ester; Acetone; Propylene glycol monomethyl ether acetate.

Additional labelling according to Directive 75/324/EEC relating to aerosol dispensers

Extremely flammable. Keep out of reach of children. Pressurized container: may burst if heated. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not pierce or burn, even after use. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

2.3 Other hazards

There is no additional information.

Results of PBT and vPvB assessment

Does not contain any substances that are assessed to be a PBT or a vPvB ≥ 0.1%.

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0.1%.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

The product does not contain (other) ingredients which are classified according to present knowledge of the supplier and contribute to the classification of the product and hence require reporting in this section.

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
n-butyl acetate; acetic acid n-butyl ester	CAS No 123-86-4 EC No 204-658-1 Index No 607-025-00-1 REACH Reg. No 01-2119485493-29-xxxx	25 – < 50	Flam. Liq. 3 / H226 STOT SE 3 / H336 EUH066		GHS-HC IOELV
Acetone	CAS No 67-64-1 EC No 200-662-2 Index No 606-001-00-8 REACH Reg. No 01-2119471330-49-xxxx	25 – < 50	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336 EUH066		GHS-HC IOELV
2,2'-oxybisethanol	CAS No 111-46-6 EC No 203-872-2 Index No 603-140-00-6 REACH Reg. No 01-2119457857-21-xxxx	10 – < 25	Acute Tox. 4 / H302		GHS-HC
Xylene	CAS No 1330-20-7 EC No 215-535-7 Index No 601-022-00-9 REACH Reg. No 01-2119488216-32-xxxx	5 – < 10	Flam. Liq. 3 / H226 Acute Tox. 4 / H312 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 STOT SE 3 / H335 STOT RE 2 / H373 Asp. Tox. 1 / H304 Aquatic Chronic 3 / H412		C(a) GHS-HC IOELV

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Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Propylene glycol mono-methyl ether acetate	CAS No 108-65-6 EC No 203-603-9 Index No 607-195-00-7 REACH Reg. No 01-2119475791-29-xxxx	5 - < 10	Flam. Liq. 3 / H226 STOT SE 3 / H336		GHS-HC IOELV
butanone	CAS No 78-93-3 EC No 201-159-0 Index No 606-002-00-3 REACH Reg. No 01-2119457290-43-xxxx	5 - < 10	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336 EUH066		GHS-HC IOELV
octhilinone	CAS No 26530-20-1 EC No 247-761-7 Index No 613-112-00-5 REACH Reg. No 01-2120768921-45-xxxx	< 1	Acute Tox. 3 / H301 Acute Tox. 3 / H311 Acute Tox. 2 / H330 Skin Corr. 1 / H314 Eye Dam. 1 / H318 Skin Sens. 1A / H317 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410 EUH071		GHS-HC
Ethyl Benzene	CAS No 100-41-4 EC No 202-849-4 Index No 601-023-00-4 REACH Reg. No 01-2119489370-35-xxxx	< 1	Flam. Liq. 2 / H225 Acute Tox. 4 / H332 STOT RE 2 / H373 Asp. Tox. 1 / H304 Aquatic Chronic 3 / H412		GHS-HC IARC: 2B IOELV

Notes
C(a): Mixture of isomers
GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)
IARC: IARC group 2B: possibly carcinogenic to humans (International Agency for Research on Cancer)
2B:
IOELV: Substance with a community indicative occupational exposure limit value

Name of sub-stance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
2,2'-oxybisethanol	CAS No 111-46-6 EC No 203-872-2	-	-	500 $^{mg}/_{kg}$	oral
Xylene	CAS No 1330-20-7 EC No 215-535-7	-	-	1.100 $^{mg}/_{kg}$ 11 $^{mg}/_{l}$/4h	dermal inhalation: vapour
octhilinone	CAS No 26530-20-1 EC No 247-761-7	Skin Sens. 1A; H317: C ≥ 0,0015 %	M-factor (acute) = 100 M-factor (chronic) = 100	125 $^{mg}/_{kg}$ 300 $^{mg}/_{kg}$ 0,5 $^{mg}/_{l}$/4h 0,27 $^{mg}/_{l}$/4h	oral dermal inhalation: vapour inhalation: dust/ mist
Ethyl Benzene	CAS No 100-41-4 EC No 202-849-4	-	-	11 $^{mg}/_{l}$/4h	inhalation: vapour

Remarks

All the percentages given are percentages by weight unless stated otherwise. For full text of H-phrases: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. In case of unconsciousness place person in the recovery position. Never give anything by mouth. 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 respiratory tract irritation, consult a physician.

Following skin contact

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

Following eye contact

Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor.

Following ingestion

Rinse mouth with water (only if the person is conscious).

4.2 Most important symptoms and effects, both acute and delayed

Narcotic effects.

4.3 Indication of any immediate medical attention and special treatment needed

For specialist advice physicians should contact the poison centre.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray; Dry extinguishing powder;
Co-ordinate firefighting measures to the fire surroundings.

Unsuitable extinguishing media

Water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

During fire hazardous fumes/smoke could be produced.

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

Self-contained breathing apparatus (EN 133). Standard protective clothing for firefighters.

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.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Use personal protective equipment as required.

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.

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

Recommendations

- measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas. Ground/bond container and receiving equipment.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- flammability hazards

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Protect from sunlight.

- incompatible substances or mixtures

Keep away from alkalis, oxidising substances, acids.

Control of effects

Protect against external exposure, such as

High temperatures. UV-radiation/sunlight.

Consideration of other advice

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

- packaging compatibilities

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

7.3 Specific end use(s)

There is no additional information.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

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
DE	hydrocarbon mixture (RCP method)		AGW		200		400		TRGS 900
DE	ethylbenzene	100-41-4	AGW	20	88	40	176	H, Y	TRGS 900
DE	2-methoxy-1-methylethyl acetate	108-65-6	AGW	50	270	50	270	Y	TRGS 900
DE	2,2'-oxydiethanol	111-46-6	AGW	10	44	40	176	va, Y	TRGS 900
DE	diethylene glycol	111-46-6	MAK	10	44	40	176	va	DFG
DE	1-butyl acetate	123-86-4	MAK	100	480	200	960		DFG
DE	n-butyl acetate	123-86-4	AGW	62	300	124	600	Y	TRGS 900

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
DE	xylene, mixture of isomers	1330-20-7	MAK	50	220	100	440		DFG
DE	xylene, mixture of isomers	1330-20-7	AGW	50	220	100	440	H	TRGS 900
DE	2-octyl-2H-isothiazol-3-one	26530-20-1	AGW		0,05		0,1	i, H, Y	TRGS 900
DE	acetone	67-64-1	AGW	500	1.200	1.000	2.400	Y	TRGS 900
DE	butanone	78-93-3	AGW	200	600	200	600	H, Y	TRGS 900
EU	ethylbenzene	100-41-4	IOELV	100	442	200	884	H	2000/39/EC
EU	2-methoxy-1-methylethyl acetate	108-65-6	IOELV	50	275	100	550	H	2000/39/EC
EU	n-butyl acetate	123-86-4	IOELV	50	241	150	723		2019/1831/EU
EU	xylene	1330-20-7	IOELV	50	221	100	442	H	2000/39/EC
EU	acetone	67-64-1	IOELV	500	1.210				2000/39/EC
EU	ethyl methyl ketone	78-93-3	IOELV	200	600	300	900		2000/39/EC

Notation

H	absorbed through the skin
i	inhalable 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)
va	as vapours and aerosols
Y	a risk of developmental toxicity does not need to be expected if the occupational exposure limit value and the biological limit value (BGW) are adhered to

Biological limit values

Biological limit values

Country	Name of agent	Parameter	Notation	Identifier	Value	Source
DE	ethylbenzene	mandelic acid, benzoylformic acid		BAT	250 mg/l	DFG
DE	ethylbenzene	mandelic acid, benzoylformic acid	crea	BLV	250 mg/g	TRGS 903
DE	xylene, mixture of isomers	methylhippuric acids		BAT	2.000 mg/l	DFG
DE	xylene, mixture of isomers	methylhippuric acids		BLV	2.000 mg/l	TRGS 903
DE	Aceton	Aceton		BAT	50 mg/l	DFG
DE	Aceton	Aceton		BAT (BAR)	2,5 mg/l	DFG
DE	acetone	acetone		BLV	80 mg/l	TRGS 903
DE	butanone (methyl ethyl ketone)	2-butanone		BLV	2 mg/l	TRGS 903

Biological limit values

Country	Name of agent	Parameter	Nota-tion	Identifier	Value	Source
DE	butanone (methyl ethyl ketone)	ethyl methyl ketone		BAT	2 mg/l	DFG

Notation
crea creatinine

Relevant DNELs/DMELs/PNECs and other threshold levels

Relevant DNELs of components of the mixture

Name of sub-stance	CAS No	End-point	Threshold level	Protection goal, route of expos-ure	Used in	Exposure time
n-butyl acetate; acet-ic acid n-butyl ester	123-86-4	DNEL	48 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
n-butyl acetate; acet-ic acid n-butyl ester	123-86-4	DNEL	7 mg/kg bw/ day	human, dermal	worker (industry)	chronic - systemic effects
n-butyl acetate; acet-ic acid n-butyl ester	123-86-4	DNEL	12 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
n-butyl acetate; acet-ic acid n-butyl ester	123-86-4	DNEL	3,4 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
n-butyl acetate; acet-ic acid n-butyl ester	123-86-4	DNEL	3,4 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
n-butyl acetate; acet-ic acid n-butyl ester	123-86-4	DNEL	300 mg/m³	human, inhalatory	worker (industry)	chronic - local ef-fects
n-butyl acetate; acet-ic acid n-butyl ester	123-86-4	DNEL	600 mg/m³	human, inhalatory	worker (industry)	acute - local effects
n-butyl acetate; acet-ic acid n-butyl ester	123-86-4	DNEL	11 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic ef-fects
n-butyl acetate; acet-ic acid n-butyl ester	123-86-4	DNEL	35,7 mg/m³	human, inhalatory	consumer (private households)	chronic - local ef-fects
n-butyl acetate; acet-ic acid n-butyl ester	123-86-4	DNEL	300 mg/m³	human, inhalatory	consumer (private households)	acute - local effects
n-butyl acetate; acet-ic acid n-butyl ester	123-86-4	DNEL	6 mg/kg bw/ day	human, dermal	consumer (private households)	acute - systemic ef-fects
n-butyl acetate; acet-ic acid n-butyl ester	123-86-4	DNEL	2 mg/kg bw/ day	human, oral	consumer (private households)	acute - systemic ef-fects
Acetone	67-64-1	DNEL	1.210 mg/ m³	human, inhalatory	worker (industry)	chronic - systemic effects
Acetone	67-64-1	DNEL	2.420 mg/ m³	human, inhalatory	worker (industry)	acute - local effects
Acetone	67-64-1	DNEL	186 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Acetone	67-64-1	DNEL	200 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects

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
Acetone	67-64-1	DNEL	62 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
Acetone	67-64-1	DNEL	62 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
2,2'-oxybisethanol	111-46-6	DNEL	44 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
2,2'-oxybisethanol	111-46-6	DNEL	60 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
2,2'-oxybisethanol	111-46-6	DNEL	43 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
2,2'-oxybisethanol	111-46-6	DNEL	12 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
2,2'-oxybisethanol	111-46-6	DNEL	12 mg/m³	human, inhalatory	consumer (private households)	chronic - local effects
2,2'-oxybisethanol	111-46-6	DNEL	21 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
Xylene	1330-20-7	DNEL	221 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Xylene	1330-20-7	DNEL	442 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
Xylene	1330-20-7	DNEL	221 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
Xylene	1330-20-7	DNEL	442 mg/m³	human, inhalatory	worker (industry)	acute - local effects
Xylene	1330-20-7	DNEL	212 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Xylene	1330-20-7	DNEL	65,3 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
Xylene	1330-20-7	DNEL	260 mg/m³	human, inhalatory	consumer (private households)	acute - systemic effects
Xylene	1330-20-7	DNEL	65,3 mg/m³	human, inhalatory	consumer (private households)	chronic - local effects
Xylene	1330-20-7	DNEL	260 mg/m³	human, inhalatory	consumer (private households)	acute - local effects
Xylene	1330-20-7	DNEL	125 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
Xylene	1330-20-7	DNEL	12,5 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
Propylene glycol monomethyl ether acetate	108-65-6	DNEL	275 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Propylene glycol monomethyl ether acetate	108-65-6	DNEL	550 mg/m³	human, inhalatory	worker (industry)	acute - local effects

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
Propylene glycol monomethyl ether acetate	108-65-6	DNEL	796 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Propylene glycol monomethyl ether acetate	108-65-6	DNEL	33 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
Propylene glycol monomethyl ether acetate	108-65-6	DNEL	33 mg/m³	human, inhalatory	consumer (private households)	chronic - local effects
Propylene glycol monomethyl ether acetate	108-65-6	DNEL	320 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
Propylene glycol monomethyl ether acetate	108-65-6	DNEL	36 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
butanone	78-93-3	DNEL	600 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
butanone	78-93-3	DNEL	1.161 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
butanone	78-93-3	DNEL	106 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
butanone	78-93-3	DNEL	412 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
butanone	78-93-3	DNEL	31 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
Ethyl Benzene	100-41-4	DNEL	77 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Ethyl Benzene	100-41-4	DNEL	293 mg/m³	human, inhalatory	worker (industry)	acute - local effects
Ethyl Benzene	100-41-4	DNEL	180 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Ethyl Benzene	100-41-4	DNEL	15 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
Ethyl Benzene	100-41-4	DNEL	1,6 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects

Relevant PNECs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
n-butyl acetate; acetic acid n-butyl ester	123-86-4	PNEC	0,18 mg/l	aquatic organisms	freshwater	short-term (single instance)
n-butyl acetate; acetic acid n-butyl ester	123-86-4	PNEC	0,018 mg/l	aquatic organisms	marine water	short-term (single instance)
n-butyl acetate; acetic acid n-butyl ester	123-86-4	PNEC	0,36 mg/l	aquatic organisms	water	intermittent release

Relevant PNECs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
n-butyl acetate; acetic acid n-butyl ester	123-86-4	PNEC	35,6 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
n-butyl acetate; acetic acid n-butyl ester	123-86-4	PNEC	0,981 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
n-butyl acetate; acetic acid n-butyl ester	123-86-4	PNEC	0,098 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
n-butyl acetate; acetic acid n-butyl ester	123-86-4	PNEC	0,09 mg/kg	terrestrial organisms	soil	short-term (single instance)
Acetone	67-64-1	PNEC	21 mg/l	aquatic organisms	water	intermittent release
Acetone	67-64-1	PNEC	10,6 mg/l	aquatic organisms	freshwater	short-term (single instance)
Acetone	67-64-1	PNEC	1,06 mg/l	aquatic organisms	marine water	short-term (single instance)
Acetone	67-64-1	PNEC	100 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Acetone	67-64-1	PNEC	30,4 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Acetone	67-64-1	PNEC	3,04 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Acetone	67-64-1	PNEC	29,5 mg/kg	terrestrial organisms	soil	short-term (single instance)
2,2'-oxybisethanol	111-46-6	PNEC	10 mg/l	aquatic organisms	water	intermittent release
2,2'-oxybisethanol	111-46-6	PNEC	10 mg/l	aquatic organisms	freshwater	short-term (single instance)
2,2'-oxybisethanol	111-46-6	PNEC	1 mg/l	aquatic organisms	marine water	short-term (single instance)
2,2'-oxybisethanol	111-46-6	PNEC	199,5 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
2,2'-oxybisethanol	111-46-6	PNEC	20,9 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
2,2'-oxybisethanol	111-46-6	PNEC	2,09 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
2,2'-oxybisethanol	111-46-6	PNEC	1,53 mg/kg	terrestrial organisms	soil	short-term (single instance)
Xylene	1330-20-7	PNEC	0,327 mg/l	aquatic organisms	water	intermittent release
Xylene	1330-20-7	PNEC	0,327 mg/l	aquatic organisms	freshwater	short-term (single instance)
Xylene	1330-20-7	PNEC	0,327 mg/l	aquatic organisms	marine water	short-term (single instance)
Xylene	1330-20-7	PNEC	6,58 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)

Relevant PNECs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Xylene	1330-20-7	PNEC	12,46 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Xylene	1330-20-7	PNEC	12,46 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Xylene	1330-20-7	PNEC	2,31 mg/kg	terrestrial organisms	soil	short-term (single instance)
Propylene glycol monomethyl ether acetate	108-65-6	PNEC	6,35 mg/l	aquatic organisms	water	intermittent release
Propylene glycol monomethyl ether acetate	108-65-6	PNEC	0,635 mg/l	aquatic organisms	freshwater	short-term (single instance)
Propylene glycol monomethyl ether acetate	108-65-6	PNEC	0,064 mg/l	aquatic organisms	marine water	short-term (single instance)
Propylene glycol monomethyl ether acetate	108-65-6	PNEC	100 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Propylene glycol monomethyl ether acetate	108-65-6	PNEC	3,29 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Propylene glycol monomethyl ether acetate	108-65-6	PNEC	0,329 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Propylene glycol monomethyl ether acetate	108-65-6	PNEC	0,29 mg/kg	terrestrial organisms	soil	short-term (single instance)
butanone	78-93-3	PNEC	709 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
butanone	78-93-3	PNEC	284,7 mg/kg	benthic organisms	sediments	short-term (single instance)
butanone	78-93-3	PNEC	284,7 mg/kg	pelagic organisms	sediments	short-term (single instance)
butanone	78-93-3	PNEC	1.000 mg/kg	(top) predators	water	short-term (single instance)
butanone	78-93-3	PNEC	55,8 mg/l	aquatic organisms	water	intermittent release
butanone	78-93-3	PNEC	55,8 mg/l	aquatic organisms	freshwater	short-term (single instance)
butanone	78-93-3	PNEC	55,8 mg/l	aquatic organisms	marine water	short-term (single instance)
butanone	78-93-3	PNEC	709 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
butanone	78-93-3	PNEC	284,7 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
butanone	78-93-3	PNEC	284,7 mg/kg	aquatic organisms	marine sediment	short-term (single instance)

Relevant PNECs of components of the mixture

Name of sub-stance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
butanone	78-93-3	PNEC	22,5 mg/kg	terrestrial organ-isms	soil	short-term (single instance)
octhilinone	26530-20-1	PNEC	2,2 µg/l	aquatic organisms	freshwater	short-term (single instance)
octhilinone	26530-20-1	PNEC	0,22 µg/l	aquatic organisms	marine water	short-term (single instance)
octhilinone	26530-20-1	PNEC	47,5 µg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
octhilinone	26530-20-1	PNEC	4,75 µg/kg	aquatic organisms	marine sediment	short-term (single instance)
octhilinone	26530-20-1	PNEC	8,2 µg/kg	terrestrial organ-isms	soil	short-term (single instance)
Ethyl Benzene	100-41-4	PNEC	0,1 mg/l	aquatic organisms	water	intermittent release
Ethyl Benzene	100-41-4	PNEC	0,1 mg/l	aquatic organisms	freshwater	short-term (single instance)
Ethyl Benzene	100-41-4	PNEC	0,01 mg/l	aquatic organisms	marine water	short-term (single instance)
Ethyl Benzene	100-41-4	PNEC	9,6 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Ethyl Benzene	100-41-4	PNEC	13,7 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Ethyl Benzene	100-41-4	PNEC	1,37 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Ethyl Benzene	100-41-4	PNEC	2,68 mg/kg	terrestrial organ-isms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Use safety goggle with side protection (EN 166).

Skin protection

Protective clothing (EN 340 & EN ISO 13688).

- hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. ATTENTION: Wearing moisture-proof gloves (occlusion) for longer than 4 hours is defined as a risk in Germany. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- type of material

Nitrile rubber

- material thickness

Use gloves with a minimum material thickness: ≥ 0,38 mm.

- breakthrough time of the glove material

Use gloves with a minimum breakthrough time of the glove material: >480 minutes (permeation: level 6).

- other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling. Provide eyewash stations and safety showers at the workplace.

Respiratory protection

During spraying wear suitable respiratory equipment. In case of inadequate ventilation wear respiratory protection. Full face mask/half mask/quarter mask (EN 136/140).

Environmental exposure controls

Take appropriate precautions to avoid uncontrolled release into the environment. 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	liquid, gaseous (spray aerosol)
Colour	transparent - clear
Odour	solvent-like
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	56,05 °C calculated value, referring to a component of the mixture
Evaporation rate	not determined
Flammability	flammable aerosol in accordance with GHS criteria
Lower and upper explosion limit	LEL: <1,5 vol% / UEL: >9,5 vol%
Flash point	>490 °C at 3 bar (fluid) calculated value
Auto-ignition temperature	333 °C (auto-ignition temperature (liquids and gases))
Decomposition temperature	no data available
pH (value)	4,1
Kinematic viscosity	not relevant
Solubility(ies)	not determined

Partition coefficient n-octanol/water (log value)	this information is not available

Vapour pressure	240 hPa at 20 °C calculated value, referring to a component of the mixture

Density	0,79 $^{g}/_{cm^3}$

Particle characteristics	not relevant (aerosol)

9.2 Other information

Information with regard to physical hazard classes

Aerosols

- components (flammable)	66,34 %

Other safety characteristics

Propellant content	0 %

SECTION 10: Stability and reactivity

10.1 Reactivity

The mixture contains reactive substance(s). Risk of ignition.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Do not spray on an open flame or other ignition source. Keep away from heat.

Hints to prevent fire or explosion

Protect from sunlight.

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. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Test data are not available for the complete mixture.

Classification procedure

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

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

Acute toxicity

Shall not be classified as acutely toxic.

- acute toxicity of components of the mixture

Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
2,2'-oxybisethanol	111-46-6	oral	500 $^{mg}/_{kg}$
Xylene	1330-20-7	dermal	1.100 $^{mg}/_{kg}$
Xylene	1330-20-7	inhalation: vapour	11 $^{mg}/_{l}$/4h
octhilinone	26530-20-1	oral	125 $^{mg}/_{kg}$
octhilinone	26530-20-1	dermal	300 $^{mg}/_{kg}$
octhilinone	26530-20-1	inhalation: vapour	0,5 $^{mg}/_{l}$/4h
octhilinone	26530-20-1	inhalation: dust/mist	0,27 $^{mg}/_{l}$/4h
Ethyl Benzene	100-41-4	inhalation: vapour	11 $^{mg}/_{l}$/4h

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Acetone	67-64-1	oral	LD50	5.800 $^{mg}/_{kg}$	rat
2,2'-oxybisethanol	111-46-6	inhalation: dust/ mist	LC50	>4,6 $^{mg}/_{l}$/4h	rat
2,2'-oxybisethanol	111-46-6	dermal	LD50	13.300 $^{mg}/_{kg}$	rabbit
Xylene	1330-20-7	dermal	LD50	5.627 $^{mg}/_{kg}$	mouse
Xylene	1330-20-7	oral	LD50	3.523 $^{mg}/_{kg}$	rat
Propylene glycol monomethyl ether acetate	108-65-6	oral	LD50	6.190 – 10.000 $^{mg}/_{kg}$	rat
Propylene glycol monomethyl ether acetate	108-65-6	dermal	LD50	>2.000 $^{mg}/_{kg}$	rat
butanone	78-93-3	oral	LD50	2.054 $^{mg}/_{kg}$	rat
octhilinone	26530-20-1	oral	LD50	125 $^{mg}/_{kg}$	rat
Ethyl Benzene	100-41-4	oral	LD50	3.500 $^{mg}/_{kg}$	rat

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0.1%.

Other information

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Acc. to 1272/2008/EC: Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
n-butyl acetate; acetic acid n-butyl ester	123-86-4	ErC50	335 $^{mg}/_{l}$	algae	24 h
n-butyl acetate; acetic acid n-butyl ester	123-86-4	LC50	18 $^{mg}/_{l}$	fish	96 h
n-butyl acetate; acetic acid n-butyl ester	123-86-4	EC50	18 $^{mg}/_{l}$	fish	96 h
n-butyl acetate; acetic acid n-butyl ester	123-86-4	NOEC	196 $^{mg}/_{l}$	algae	24 h
Acetone	67-64-1	LC50	8.120 $^{mg}/_{l}$	fish	96 h
2,2'-oxybisethanol	111-46-6	LC50	75.200 $^{mg}/_{l}$	fish	96 h

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
2,2'-oxybisethanol	111-46-6	EC50	>10.000 mg/l	aquatic invertebrates	24 h
Xylene	1330-20-7	LC50	8,4 mg/l	fish	96 h
Xylene	1330-20-7	EC50	4,9 mg/l	algae	72 h
Xylene	1330-20-7	ErC50	4,7 mg/l	algae	72 h
Propylene glycol monomethyl ether acetate	108-65-6	LC50	180 mg/l	fish	96 h
Propylene glycol monomethyl ether acetate	108-65-6	EC50	>500 mg/l	aquatic invertebrates	48 h
Propylene glycol monomethyl ether acetate	108-65-6	ErC50	>1.000 mg/l	algae	96 h
Propylene glycol monomethyl ether acetate	108-65-6	NOEC	100 mg/l	fish	96 h
Propylene glycol monomethyl ether acetate	108-65-6	LOEC	>1.000 mg/l	algae	96 h
butanone	78-93-3	LC50	2.993 mg/l	fish	96 h
butanone	78-93-3	EC50	308 mg/l	aquatic invertebrates	48 h
butanone	78-93-3	ErC50	2.029 mg/l	algae	96 h
butanone	78-93-3	NOEC	1.170 mg/l	fish	96 h
butanone	78-93-3	NOAEC	1.240 mg/l	algae	96 h
butanone	78-93-3	growth rate (ErCx) 10%	1.289 mg/l	algae	96 h
octhilinone	26530-20-1	LC50	0,122 mg/l	fish	96 h
octhilinone	26530-20-1	ErC50	0,15 mg/l	algae	96 h
Ethyl Benzene	100-41-4	LC50	7 mg/l	fish	24 h
Ethyl Benzene	100-41-4	EC50	2,4 mg/l	aquatic invertebrates	48 h
Ethyl Benzene	100-41-4	NOEC	3,3 mg/l	fish	96 h

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
n-butyl acetate; acetic acid n-butyl ester	123-86-4	ErC50	335 mg/l	algae	24 h
n-butyl acetate; acetic acid n-butyl ester	123-86-4	EC50	34,2 mg/l	aquatic invertebrates	21 d
n-butyl acetate; acetic acid n-butyl ester	123-86-4	LC50	43,5 mg/l	aquatic invertebrates	21 d

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
n-butyl acetate; acetic acid n-butyl ester	123-86-4	NOEC	23,2 mg/l	aquatic invertebrates	21 d
n-butyl acetate; acetic acid n-butyl ester	123-86-4	LOEC	47,6 mg/l	aquatic invertebrates	21 d
Acetone	67-64-1	EC50	61,15 g/l	microorganisms	30 min
Acetone	67-64-1	NOEC	2.212 mg/l	aquatic invertebrates	28 d
Acetone	67-64-1	LOEC	2.212 mg/l	aquatic invertebrates	28 d
Acetone	67-64-1	growth (EbCx) 12%	1.000 mg/l	microorganisms	30 min
2,2'-oxybisethanol	111-46-6	EC50	>10.000 mg/l	aquatic invertebrates	24 h
2,2'-oxybisethanol	111-46-6	growth (EbCx) 20%	>1.995 mg/l	microorganisms	30 min
Xylene	1330-20-7	EL50	2,9 mg/l	aquatic invertebrates	21 d
Xylene	1330-20-7	ErC50	4,36 mg/l	algae	73 h
Xylene	1330-20-7	EC50	2,2 mg/l	algae	73 h
Xylene	1330-20-7	NOEC	>1,3 mg/l	fish	56 d
Xylene	1330-20-7	LOEC	3,16 mg/l	aquatic invertebrates	21 d
Xylene	1330-20-7	growth rate (ErCx) 10%	1,9 mg/l	algae	73 h
Propylene glycol monomethyl ether acetate	108-65-6	LC50	63,5 mg/l	fish	14 d
Propylene glycol monomethyl ether acetate	108-65-6	EC50	>100 mg/l	aquatic invertebrates	21 d
Propylene glycol monomethyl ether acetate	108-65-6	NOEC	47,5 mg/l	fish	14 d
Propylene glycol monomethyl ether acetate	108-65-6	growth (EbCx) 10%	>1.000 mg/l	microorganisms	30 min
butanone	78-93-3	LC50	1.816 mg/l	fish	24 h
butanone	78-93-3	EC50	>345 mg/l	aquatic invertebrates	24 h
butanone	78-93-3	ErC50	1.901 mg/l	algae	24 h
Ethyl Benzene	100-41-4	EC50	2,8 mg/l	aquatic invertebrates	24 h
Ethyl Benzene	100-41-4	LC50	3,6 mg/l	aquatic invertebrates	7 d
Ethyl Benzene	100-41-4	LOEL	1,7 mg/l	aquatic invertebrates	7 d
Ethyl Benzene	100-41-4	NOEC	0,96 mg/l	aquatic invertebrates	7 d
Ethyl Benzene	100-41-4	LOEC	1,7 mg/l	aquatic invertebrates	7 d

12.2 Persistence and degradability

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time	Method
n-butyl acetate; acetic acid n-butyl ester	123-86-4	oxygen depletion	80 %	5 d	
Acetone	67-64-1	carbon dioxide generation	90,9 %	28 d	
Xylene	1330-20-7	oxygen depletion	98 %	28 d	
Propylene glycol monomethyl ether acetate	108-65-6	carbon dioxide generation	90 %	28 d	
Propylene glycol monomethyl ether acetate	108-65-6	oxygen depletion	60 %	5,9 d	
Propylene glycol monomethyl ether acetate	108-65-6	DOC removal	99 %	28 d	
butanone	78-93-3	oxygen depletion	98 %	28 d	

12.3 Bioaccumulative potential

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
n-butyl acetate; acetic acid n-butyl ester	123-86-4		2,3 (pH value: ~7, 25 °C)	
Acetone	67-64-1		-0,23	
2,2'-oxybisethanol	111-46-6	100	-1,98	
Xylene	1330-20-7	>5,5 – <12,2	3,2 (pH value: 7, 20 °C)	
Propylene glycol monomethyl ether acetate	108-65-6		1,2 (pH value: 6,8, 20 °C)	
butanone	78-93-3		0,3 (pH value: 7, 40 °C)	
octhilinone	26530-20-1		2,61 (pH value: 7, 25 °C)	
Ethyl Benzene	100-41-4	1	3,6 (pH value: 7,84, 20 °C)	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Does not contain any substances that are assessed to be a PBT or a vPvB ≥ 0.1%.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0.1%.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. 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. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID/ADN	UN 1950
IMDG-Code	UN 1950
ICAO-TI	UN 1950

14.2 UN proper shipping name

ADR/RID/ADN	AEROSOLS flammable
IMDG-Code	AEROSOLS
ICAO-TI	Aerosols, flammable

14.3 Transport hazard class(es)

ADR/RID/ADN	2 (2.1)
IMDG-Code	2.1
ICAO-TI	2.1

14.4 Packing group

not assigned

14.5 Environmental hazards

hazardous to the aquatic environment

Environmentally hazardous substance (aquatic environment)	octhilinone

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments

No data available.

Information for each of the UN Model Regulations

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

Classification code	5F
Danger label(s)	2.1, fish and tree

Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	190, 327, 344, 625
Excepted quantities (EQ)	E0
Limited quantities (LQ)	1 L
Transport category (TC)	2
Tunnel restriction code (TRC)	D

International Maritime Dangerous Goods Code (IMDG) - additional information

Marine pollutant	yes (hazardous to the aquatic environment)
Danger label(s)	2.1, fish and tree

Special provisions (SP)	63, 190, 277, 327, 344, 381, 959
Excepted quantities (EQ)	E0
Limited quantities (LQ)	1 L
EmS	F-D, S-U
Stowage category	-

International Civil Aviation Organization (ICAO-IATA/DGR) - additional information

Environmental hazards	yes (hazardous to the aquatic environment)
Danger label(s)	2.1

Special provisions (SP)	A145, A167
Excepted quantities (EQ)	E0
Limited quantities (LQ)	30 kg

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

Name	Name acc. to inventory	Restriction	No
butanone	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	R3	3
butanone	flammable / pyrophoric	R40	40
butanone	substances in tattoo inks and permanent make-up	R75	75
Acetone	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	R3	3
Acetone	flammable / pyrophoric	R40	40

Name	Name acc. to inventory	Restriction	No
Acetone	substances in tattoo inks and permanent make-up	R75	75
octhilinone	this product meets the criteria for classification in accordance with Regulation No 1272/2008/ EC	R3	3
octhilinone	substances in tattoo inks and permanent make-up	R75	75
Xylene	this product meets the criteria for classification in accordance with Regulation No 1272/2008/ EC	R3	3
Xylene	flammable / pyrophoric	R40	40
Xylene	substances in tattoo inks and permanent make-up	R75	75
Ethyl Benzene	this product meets the criteria for classification in accordance with Regulation No 1272/2008/ EC	R3	3
Ethyl Benzene	flammable / pyrophoric	R40	40
n-butyl acetate; acetic acid n-butyl ester	this product meets the criteria for classification in accordance with Regulation No 1272/2008/ EC	R3	3
n-butyl acetate; acetic acid n-butyl ester	flammable / pyrophoric	R40	40
2,2'-oxybisethanol	this product meets the criteria for classification in accordance with Regulation No 1272/2008/ EC	R3	3
Propylene glycol monomethyl ether acetate	this product meets the criteria for classification in accordance with Regulation No 1272/2008/ EC	R3	3
Propylene glycol monomethyl ether acetate	flammable / pyrophoric	R40	40

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 ash-trays,
- 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 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 Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
(a) lamp oils, labelled with 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 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 fluid may lead to life threatening lung damage’;
(c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.’;

Legend

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 Community provisions 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 (2).

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.

Legend

R75 1. Shall not be placed on the market in mixtures for use for tattooing purposes, and mixtures containing any such substances shall not be used for tattooing purposes, after 4 January 2022 if the substance or substances in question is or are present in the following circumstances:
(a) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
(b) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as reproductive toxicant category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
(c) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin sensitiser category 1, 1A or 1B, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
(d) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2, or as serious eye damage category 1 or eye irritant category 2, the substance is present in the mixture in a concentration equal to or greater than:
(i) 0,1 % by weight, if the substance is used solely as a pH regulator;
(ii) 0,01 % by weight, in all other cases;
(e) in the case of a substance listed in Annex II to Regulation (EC) No 1223/2009 (*1), the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
(f) in the case of a substance for which a condition of one or more of the following kinds is specified in column g (Product type, Body parts) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight:
(i) “Rinse-off products”;
(ii) “Not to be used in products applied on mucous membranes”;
(iii) “Not to be used in eye products”;
(g) in the case of a substance for which a condition is specified in column h (Maximum concentration in ready for use preparation) or column i (Other) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration, or in some other way, that does not accord with the condition specified in that column;
(h) in the case of a substance listed in Appendix 13 to this Annex, the substance is present in the mixture in a concentration equal to or greater than the concentration limit specified for that substance in that Appendix.
2. For the purposes of this entry use of a mixture “for tattooing purposes” means injection or introduction of the mixture into a person’s skin, mucous membrane or eyeball, by any process or procedure (including procedures commonly referred to as permanent make-up, cosmetic tattooing, micro-blading and micro-pigmentation), with the aim of making a mark or design on his or her body.
3. If a substance not listed in Appendix 13 falls within more than one of points (a) to (g) of paragraph 1, the strictest concentration limit laid down in the points in question shall apply to that substance. If a substance listed in Appendix 13 also falls within one or more of points (a) to (g) of paragraph 1, the concentration limit laid down in point (h) of paragraph 1 shall apply to that substance.
4. By way of derogation, paragraph 1 shall not apply to the following substances until 4 January 2023:
(a) Pigment Blue 15:3 (CI 74160, EC No 205-685-1, CAS No 147-14-8);
(b) Pigment Green 7 (CI 74260, EC No 215-524-7, CAS No 1328-53-6).
5. If Part 3 of Annex VI to Regulation (EC) No 1272/2008 is amended after 4 January 2021 to classify or re-classify a substance such that the substance then becomes caught by point (a), (b), (c) or (d) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the date of application of that new or revised classification is after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect on the date of application of that new or revised classification.
6. If Annex II or Annex IV to Regulation (EC) No 1223/2009 is amended after 4 January 2021 to list or change the listing of a substance such that the substance then becomes caught by point (e), (f) or (g) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the amendment takes effect after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect from the date falling 18 months after entry into force of the act by which that amendment was made.
7. Suppliers placing a mixture on the market for use for tattooing purposes shall ensure that, after 4 January 2022, the mixture is marked with the following information:
(a) the statement “Mixture for use in tattoos or permanent make-up”;
(b) a reference number to uniquely identify the batch;
(c) the list of ingredients in accordance with the nomenclature established in the glossary of common ingredient names pursuant to Article 33 of Regulation (EC) No 1223/2009, or in the absence of a common ingredient name, the IUPAC name. In the absence of a common ingredient name or IUPAC name, the CAS and EC number. Ingredients shall be listed in descending order by weight or volume of the ingredients at the time of formulation. “Ingredient” means any substance added during the process of formulation and present in the mixture for use for tattooing purposes. Impurities shall not be regarded as ingredients. If the name of a substance, used as ingredient within the meaning of this entry, is already required to be stated on the label in accordance with Regulation (EC) No 1272/2008, that ingredient does not need to be marked in accordance with this Regulation;
(d) the additional statement “pH regulator” for substances falling under point (d)(i) of paragraph 1;
(e) the statement "Contains nickel. Can cause allergic reactions." if the mixture contains nickel below the concentration limit specified in Appendix 13;
(f) the statement "Contains chromium (VI). Can cause allergic reactions." if the mixture contains chromium (VI) below the concentration limit specified in Appendix 13;
(g) safety instructions for use insofar as they are not already required to be stated on the label by Regulation (EC) No 1272/2008.
The information shall be clearly visible, easily legible and marked in a way that is indelible.
The information shall be written in the official language(s) of the Member State(s) where the mixture is placed on the market, unless the Member State(s) concerned provide(s) otherwise.
Where necessary because of the size of the package, the information listed in the first subparagraph, except for point (a), shall be included instead in the instructions for use.
Before using a mixture for tattooing purposes, the person using the mixture shall provide the person undergoing the procedure with the information marked on the package or included in the instructions for use pursuant to this paragraph.
8. Mixtures that do not contain the statement “Mixture for use in tattoos or permanent make-up” shall not be used for tattooing purposes.
9. This entry does not apply to substances that are gases at temperature of 20 °C and pressure of 101,3 kPa, or generate a vapour pressure of more than 300 kPa at temperature of 50 °C, with the exception of formaldehyde (CAS No 50-00-0, EC No 200-001-8).

Legend

10. This entry does not apply to the placing on the market of a mixture for use for tattooing purposes, or to the use of a mixture for tattooing purposes, when placed on the market exclusively as a medical device or an accessory to a medical device, within the meaning of Regulation (EU) 2017/745, or when used exclusively as a medical device or an accessory to a medical device, within the same meaning. Where the placing on the market or use may not be exclusively as a medical device or an accessory to a medical device, the requirements of Regulation (EU) 2017/745 and of this Regulation shall apply cumulatively.

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

None of the ingredients are listed.

Seveso Directive

2012/18/EU (Seveso III)

No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements		Notes
E2	environmental hazards (hazardous to the aquatic environment, cat. 2)	200	500	57)

Notation

57) hazardous to the Aquatic Environment in category Chronic 2

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

Pollutant release and transfer registers (PRTR)

Name acc. to inventory	CAS No	Remarks	Threshold for releases to air (kg/year)
xylene, mixture of isomers	1330-20-7	(17) (11)	
ethylbenzene	100-41-4	(11)	

Legend

(11) Single pollutants are to be reported if the threshold for BTEX (the sum parameter of benzene, toluene, ethyl benzene, xylenes) is exceeded
(17) Total mass of xylene (ortho-xylene, meta-xylene, para-xylene)

Water Framework Directive (WFD)

List of pollutants (WFD)

Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
VireXbuster® Spray	Biocides and plant protection products		a)	
Acetone	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)	

List of pollutants (WFD)				
Name of substance	**Name acc. to inventory**	**CAS No**	**Listed in**	**Remarks**
octhilinone	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)	
Xylene	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)	
Ethyl Benzene	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)	
2,2'-oxybisethanol	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)	

Legend
A) Indicative list of the main pollutants

Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013

Explosives precursors which are subject to restrictions					
Name acc. to inventory	**CAS No**	**Type of registration**	**Remarks**	**Limit value**	**Upper limit value for the purpose of licensing under Article 5(3)**
acetone	67-64-1	Annex II			

Legend
annex II Substances on their own or in mixtures or in substances for which suspicious transactions shall be reported

Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

Regulation 528/2012/EU concerning the making available on the market and use of biocidal products

- national authorisation — Germany: N-100947

The biocidal product can be made available on the market without authorization for the duration of the approval process for the active substance or the last active substance to be approved.

National regulations (Germany)

Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances hazardous to water) (AwSV)

Wassergefährdungsklasse, WGK (water hazard class): 3 highly hazardous to water

Remarks

The product is a mixture that may contain substances whose classifications have not been published by the Federal Environment Agency in the Federal Gazette and in the Rigoletto database. The following officially applies to these substances: Substances whose classification has not been published by the Federal Environment Agency in the Federal Gazette and the Rigoletto database are not classified and must be viewed as a precautionary measure as highly hazardous to water (WGK 3).

Technical instructions on air quality control (Germany)

Number	Group of substances	Class	Conc.	Mass flow	Mass concentration	Notation
5.2.5	organic substances		≥ 25 wt%	0,5 $^{kg}/_{h}$	50 $^{mg}/_{m^3}$	3)

Notation
3) a total mass flow of 0.50 kg/h or a total mass concentration of 50 mg/m³, each of which to be indicated as total carbon, shall not be exceeded (except organic particulate matter)

Storage of hazardous substances in non-stationary containers (TRGS 510) (Germany)

Storage class (LGK): 2 B (aerosol dispensers and lighters)

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)

Complete revision of the safety data sheet.

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
2019/1831/EU	Commission Directive establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/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 relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN	Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)

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Abbr.	Descriptions of used abbreviations
AGW	Workplace exposure limit
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
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
COD	Chemical oxygen demand
DFG	Deutsche Forschungsgemeinschaft MAK-und BAT-Werte-Liste, Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Wiley-VCH, Weinheim
DGR	Dangerous Goods Regulations (see IATA/DGR)
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
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)
EINECS	European Inventory of Existing Commercial Chemical Substances
EL50	Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms
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
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code

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Abbr.	Descriptions of used abbreviations
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
LEL	Lower explosion limit (LEL)
LGK	Lagerklasse (storage class according to TRGS 510, Germany)
LOEC	Lowest Observed Effect Concentration
LOEL	Lowest Observed Effect Level
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
NOAEC	No Observed Adverse Effect Concentration
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
RCP	Reciprocal calculation procedure
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
Skin Sens.	Skin sensitisation
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
TRGS	Technische Regeln für Gefahrstoffe (technical rules for hazardous substances, Germany)
TRGS 900	Arbeitsplatzgrenzwerte (TRGS 900)
TRGS 903	Biologische Grenzwerte (TRGS 903)
TWA	Time-weighted average
UEL	Upper explosion limit (UEL)
vPvB	Very Persistent and very Bioaccumulative

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 2020/878/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).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
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
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
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.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.