Safety Data Sheet

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

AIRFLOW ERYTHRITOL TOOTHPASTE

Version number: 3.0
Replaces version of: 2020-10-20 (2)

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

1.1 Product identifier

Trade name **AIRFLOW ERYTHRITOL TOOTHPASTE**

Registration number (REACH) Not relevant (mixture)

CAS number not relevant (mixture)

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

Relevant identified uses Cleansing of teeth

1.3 Details of the supplier of the safety data sheet

Dr. Wittmann GmbH & Co. KG
Rieslingstraße 8
64673 Zwingenberg
Germany

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Please do not use this e-mail address to ask for the latest safety data sheet. For this purpose contact Dr. Wittmann GmbH & Co. KG.

National contact Verkauf

1.4 Emergency telephone number

As above or nearest toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 Label elements

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

Signal word Not required.

Pictograms Not required.

Supplemental hazard information

EUH208 Contains L-menthan-3-one. May produce an allergic reaction.
EUH210 Safety data sheet available on request.

2.3 Other hazards

Special danger of slipping by leaking/spilling product.

Results of PBT and vPvB assessment

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

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

Hazardous ingredients

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	CAS No 68439-57-6 EC No 931-534-0 REACH Reg. No 01-2119513401-57-xxxx	1 – 3	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319	
sodium fluoride	CAS No 7681-49-4 EC No 231-667-8 Index No 009-004-00-7 REACH Reg. No 01-2119539420-47-XXXX	≤ 0.3	Acute Tox. 3 / H301 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319	
L-menthan-3-one	CAS No 14073-97-3 EC No 237-926-1	≤ 0.1995	Skin Irrit. 2 / H315 Skin Sens. 1B / H317	

Hazardous ingredients

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
pin-2(10)-ene	CAS No 127-91-3 EC No 204-872-5	≤ 0.0125	Flam. Liq. 3 / H226 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411	
pin-2(10)-ene	CAS No 127-91-3 EC No 242-060-2	≤ 0.0012	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Skin Sens. 1 / H317 Asp. Tox. 1 / H304 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	

Name of substance	Specific Conc. Limits	M-Factors	ATE	Exposure route
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	Skin Irrit. 2; H315: C ≥ 5 %	-	-	-
sodium fluoride	-	-	148.5 $^{mg}/_{kg}$	oral

for full text of H-phrases: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

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

Following inhalation

Provide fresh air.

Following skin contact

Wash with plenty of water.

Following eye contact

Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.

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

These information are 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

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

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Hazardous combustion products

carbon monoxide (CO), carbon dioxide (CO2), gas/ vapor, toxic

5.3 Advice for firefighters

Keep containers cool with water spray.
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

use suitable breathing apparatus

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

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

For emergency responders

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

6.2 Environmental precautions

Keep away from drains, surface and ground water.
Retain contaminated washing water and dispose of it.
If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to clean up a spill

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

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.
Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with eyes.

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.
Keep away from sources of ignition - No smoking.

Specific notes/details

None.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.
Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

heat, frost

Consideration of other advice

Keep away from food, drink and animal feeding stuffs.

Ventilation requirements

Provision of sufficient ventilation.

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
EU	fluorine, inorganic compounds	-	IOELV	-	2.5	-	-	-	2000/39/EC
GB	fluorides, inorganic	-	WEL	-	2.5	-	-	F	EH40/2005
GB	cycloalkanes (>C7)	127-91-3	WEL	-	800	-	-	-	EH40/2005
GB	glycerol	56-81-5	WEL	-	10	-	-	mist	EH40/2005
GB	propane-1,2-diol	57-55-6	WEL	-	10	-	-	particle	EH40/2005
GB	propane-1,2-diol	57-55-6	WEL	150	474	-	-	vp	EH40/2005
GB	silica, amorphous	7631-86-9	WEL	-	6	-	-	i	EH40/2005
GB	silica, amorphous	7631-86-9	WEL	-	2.4	-	-	r	EH40/2005

Notation

F	calculated as F (fluorine)
i	inhalable fraction
mist	as mists
particle	as airborne particles
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)
vp	as vapours and particulates

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
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	DNEL	152.2 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	DNEL	2,158 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
sodium fluoride	7681-49-4	DNEL	2.5 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
sodium fluoride	7681-49-4	DNEL	0.36 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
L-menthan-3-one	14073-97-3	DNEL	26.1 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
L-menthan-3-one	14073-97-3	DNEL	7.4 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
pin-2(10)-ene	127-91-3	DNEL	5.69 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
pin-2(10)-ene	127-91-3	DNEL	0.8 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
pin-2(10)-ene	127-91-3	DNEL	54 µg/cm²	human, dermal	worker (industry)	chronic - local effects
pin-2(10)-ene	127-91-3	DNEL	5.69 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
pin-2(10)-ene	127-91-3	DNEL	0.8 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
pin-2(10)-ene	127-91-3	DNEL	54 µg/cm²	human, dermal	worker (industry)	chronic - local effects

Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	PNEC	0.024 mg/l	freshwater
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	PNEC	0.002 mg/l	marine water
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	PNEC	4 mg/l	sewage treatment plant (STP)
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	PNEC	0.767 mg/kg	freshwater sediment
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	PNEC	0.077 mg/kg	marine sediment
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	PNEC	1.21 mg/kg	soil
sodium fluoride	7681-49-4	PNEC	0.9 mg/l	freshwater
sodium fluoride	7681-49-4	PNEC	51 mg/l	sewage treatment plant (STP)
sodium fluoride	7681-49-4	PNEC	11 mg/kg	soil
L-menthan-3-one	14073-97-3	PNEC	0.031 mg/l	freshwater
L-menthan-3-one	14073-97-3	PNEC	0.003 mg/l	marine water
L-menthan-3-one	14073-97-3	PNEC	2 mg/l	sewage treatment plant (STP)
L-menthan-3-one	14073-97-3	PNEC	0.558 mg/kg	freshwater sediment
L-menthan-3-one	14073-97-3	PNEC	0.056 mg/kg	marine sediment
L-menthan-3-one	14073-97-3	PNEC	0.093 mg/kg	soil
pin-2(10)-ene	127-91-3	PNEC	1.004 µg/l	freshwater
pin-2(10)-ene	127-91-3	PNEC	0.1 µg/l	marine water

Relevant PNECs of components of the mixture				
Name of substance	**CAS No**	**Endpoint**	**Threshold level**	**Environmental compartment**
pin-2(10)-ene	127-91-3	PNEC	3.26 $^{mg}/_{l}$	sewage treatment plant (STP)
pin-2(10)-ene	127-91-3	PNEC	0.337 $^{mg}/_{kg}$	freshwater sediment
pin-2(10)-ene	127-91-3	PNEC	0.034 $^{mg}/_{kg}$	marine sediment
pin-2(10)-ene	127-91-3	PNEC	0.067 $^{mg}/_{kg}$	soil
pin-2(10)-ene	127-91-3	PNEC	1.004 $^{µg}/_{l}$	freshwater
pin-2(10)-ene	127-91-3	PNEC	0.1 $^{µg}/_{l}$	marine water
pin-2(10)-ene	127-91-3	PNEC	3.26 $^{mg}/_{l}$	sewage treatment plant (STP)
pin-2(10)-ene	127-91-3	PNEC	0.337 $^{mg}/_{kg}$	freshwater sediment
pin-2(10)-ene	127-91-3	PNEC	0.034 $^{mg}/_{kg}$	marine sediment
pin-2(10)-ene	127-91-3	PNEC	0.067 $^{mg}/_{kg}$	soil
pin-2(10)-ene: PNEC Oral - Predators - Secondary poisoning - 13,1 mg/kg				
pin-2(10)-ene: PNEC Oral - Predators - Secondary poisoning - 13,1 mg/kg				

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

Protective gloves		
Material	**Material thickness**	**Breakthrough times of the glove material**
no information available	no information available	no information available

Wear suitable gloves.
Chemical protection gloves are suitable, which are tested according to EN 374.
Check leak-tightness/impermeability prior to use.
In the case of wanting to use the gloves again, clean them before taking off and air them well.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

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	liquid (paste)
Colour	not determined
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	not determined
Kinematic viscosity	not determined
Dynamic viscosity	not determined
Solubility(ies)	
Water solubility	miscible in any proportion
Partition coefficient n-octanol/water (log value)	not determined
Vapour pressure	not determined
Density and/or relative density	
Density	1.2 $^{g}/_{cm^3}$ at 20 °C
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (liquid)

9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics	there is no additional information

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

This information is not available.

10.4 Conditions to avoid

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

10.5 Incompatible materials

There is no additional information.

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

Classification procedure

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

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

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Acute toxicity

Test data are not available for the complete mixture.

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	oral	LD50	2,079 $^{mg}/_{kg}$	rat	OECD Guideline 401	ECHA
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	inhalation: dust/ mist	LC50	>52 $^{mg}/_{l}$/ 4h	rat	OECD Guideline 403	ECHA
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	dermal	LD50	6,300 $^{mg}/_{kg}$	rabbit	OECD Guideline 402	ECHA
sodium fluoride	7681-49-4	oral	LD50	148.5 $^{mg}/_{kg}$	rat, female	EPA OPPTS 870.1100	ECHA
sodium fluoride	7681-49-4	oral	LD50	223 $^{mg}/_{kg}$	rat, male	EPA OPPTS 870.1100	ECHA
sodium fluoride	7681-49-4	dermal	LD50	>2,000 $^{mg}/_{kg}$	rat	EPA OPPTS 870.1200	ECHA

Skin corrosion/irritation

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Serious eye damage/eye irritation

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory or skin sensitisation

Contains L-menthan-3-one. May produce an allergic reaction.

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.

Endocrine disrupting properties

None of the ingredients are listed.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Test data are not available for the complete mixture.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	LC50	96 h	4.2 $^{mg}/_{l}$	zebra fish (Danio rerio)	OECD Guideline 203	ECHA
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	EC50	48 h	4.53 $^{mg}/_{l}$	daphnia magna	OECD Guideline 202	ECHA

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	ErC50	72 h	5.2 mg/l	algae (Skeletonema costatum)	DIN EN ISO 10253	ECHA
sodium fluoride	7681-49-4	EC50	96 h	26 – 48 mg/l	trichoptera aquatic larvae	US Environmental Protection Agency, 440/5-86-001	ECHA
sodium fluoride	7681-49-4	EbC50	48 h	43 mg/l	algae	-	ECHA
L-menthan-3-one	14073-97-3	LC50	96 h	>28 mg/l	zebra fish (Danio rerio)	OECD 203	ECHA
L-menthan-3-one	14073-97-3	EC50	48 h	30.6 mg/l	daphnia magna	EU Method C.2	ECHA
L-menthan-3-one	14073-97-3	ErC50	72 h	58 mg/l	algae (pseudokirchneriella subcapitata)	OECD 201	ECHA

Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	NOEC	72 h	3.2 mg/l	algae (Skeletonema costatum)	DIN EN ISO 10253	ECHA

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	NOEC	21 d	6.3 mg/l	daphnia magna	OECD Guideline 211	ECHA
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	growth rate (ErCx) 3.9%	72 h	-	algae (Skeletonema costatum)	DIN EN ISO 10253	ECHA
sodium fluoride	7681-49-4	NOEC	21 d	3.7 mg/l	daphnia magna	-	ECHA
sodium fluoride	7681-49-4	NOEC	21 d	4 mg/l	rainbow trout (Oncorhynchus mykiss)	-	ECHA
sodium fluoride	7681-49-4	NOEC	7 d	50 mg/l	algae	-	ECHA
pin-2(10)-ene	127-91-3	EC50	3 h	326 mg/l	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA
pin-2(10)-ene	127-91-3	growth (EbCx) 10%	3 h	38 mg/l	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA
pin-2(10)-ene	127-91-3	growth (EbCx) 20%	3 h	79 mg/l	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA
pin-2(10)-ene	127-91-3	growth (EbCx) 80%	3 h	1,337 mg/l	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA
pin-2(10)-ene	127-91-3	EC50	3 h	326 mg/l	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
pin-2(10)-ene	127-91-3	growth (EbCx) 10%	3 h	38 $^{mg}/_{l}$	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA
pin-2(10)-ene	127-91-3	growth (EbCx) 20%	3 h	79 $^{mg}/_{l}$	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA
pin-2(10)-ene	127-91-3	growth (EbCx) 80%	3 h	1,337 $^{mg}/_{l}$	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA

12.2 Persistence and degradability

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	carbon dioxide generation	80 %	28 d	OECD 301B	ECHA
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	DOC removal	96 %	28 d	-	ECHA
pin-2(10)-ene	127-91-3	oxygen depletion	76 %	28 d	OECD Guideline 301 D	ECHA
pin-2(10)-ene	127-91-3	oxygen depletion	76 %	28 d	OECD Guideline 301 D	ECHA

Biodegradation

Test data are not available for the complete mixture.

Persistence

No data available.

12.3 Bioaccumulative potential

Test data are not available for the complete mixture.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	Log KOW
Sulfonic acids, C14-16 (even numbered)-alkane hydroxy and C14-16 (even numbered)-alkene, sodium salts	68439-57-6	-1.3 (pH value: 5.43, 20 °C)
L-menthan-3-one	14073-97-3	3.05 (25 °C)
pin-2(10)-ene	127-91-3	4.425 (25 °C)
pin-2(10)-ene	127-91-3	4.425 (25 °C)

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): 2

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.
Directive 2008/98/EC on wastes.
Waste code (EU): 18 01 06 Chemicals consisting of or containing hazardous substances.

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.
Packaging containing residues of or contaminated by hazardous substances.
Waste code (EU): 15 01 02 Plastic packaging.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1	**UN number or ID number**	not assigned
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)

Restrictions according to REACH, Annex XVII

Name	Name acc. to inventory	CAS No	Restriction
pin-2(10)-ene	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	-	R3
pin-2(10)-ene	flammable / pyrophoric	-	R40
L-menthan-3-one	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	-	R3
pin-2(10)-ene	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	-	R3
pin-2(10)-ene	flammable / pyrophoric	-	R40

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:

Legend

- can be used as fuel in decorative oil lamps for supply to the general public, and,
- present an aspiration hazard and are labelled with R65 or H304,

4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).

5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:

(a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage';

(b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';

(c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.

6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.

7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.

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.

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

None of the ingredients are listed.

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 on the marketing and use of explosives 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.

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)

Indication of changes: Section 1, 3, 8, 13

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord 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
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level

Abbr.	Descriptions of used abbreviations
EbC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
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
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
IOELV	Indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
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

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
SVHC	Substance of Very High Concern
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

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

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.
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.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
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.

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.