

Product information es 1

Use

Liquid, silicone-free defoamer.

The application of **es 1** is quite manifold and ranges from waste water treatment over the metal processing industry to the food industry.

Features

es 1 is a liquid, silicone-free formulation with highly foam depressant properties, both in a cold and warm state. The product does not have any disruptive impact on subsequent processes, such as powder coating, painting, galvanisation or hardening.

Appearance: clear light yellow liquid
Refractive index: 1,43 – 1,44
Density: 0,93 - 0,99 g/ml

These data are to be seen as typical values and should not be considered as specifications.

Dosing

The dosing of **es 1** should be performed at a site with effective turbulence to assure an optimal blending with the cleaning solution. The application concentration typically is between 0.02 and 0.1 %.

Handling precautions

Wear suitable protective gloves and safety goggles. In case of contact immediately flush with plenty of water. After eye contact seek medical advice.

In case of spillage, absorb with sand or other absorbent materials and sweep up. Then flush the area with water.

Before use review the Material Safety Data Sheet for additional information.

Important Information

Every chemical product will be delivered with a Material Safety Data Sheet. Material Safety Data Sheets contain health and safety information relevant for your development of appropriate product handling procedures to protect your employees and customers. Our Material Safety Data Sheets should be read and understood by all of your supervisory

personal and employees before using our products in your facilities.

Shelf life

1 year in originally sealed containers.

3 months in opened containers.

Storage conditions: cool (5°C – 20°C), frost-free, dark and dry.

Packaging

1kg, 10kg and 30kg jerry cans.

All statements, information and data presented herein are believed to be accurate and reliable but are not to be taken as a guarantee, express warranty or implied warranty of merchantability of fitness for a particular purpose, or representation, express or implied, for which seller assumes legal responsibility, and they are offered solely for your consideration, investigation and verification. Statements or suggestions concerning possible use of this product are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent.

Sicherheitsdatenblatt

according to Regulation (EC) No. 1907/2006/EG, (Reach)

Revision: 29.03.2018

es 1

Version: 2.0

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

Trade name	es 1
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	Defoamer, Anti-foaming agent
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1.3 Details of the supplier of the safety data sheet

gwk Gesellschaft Wärme Kältetechnik mbH
 Scherl 10
 D-58540 Meinerzhagen
 Website: www.gwk.com

e-mail: info@gwk.com

1.4 Emergency telephone number

Poison Information Centre Berlin +49 (0) 30 30686700

SECTION 2: Hazards identification
2.1 Classification of the substance or mixture

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

Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318
4.1C	hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

for full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

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

Signal word danger

Pictograms

GHS05, GHS09



Hazard statements

H318 Causes serious eye damage.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

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

Hazardous ingredients for labelling

quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides

2.3 Other hazards

This material is combustible, but will not ignite readily.

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	M-Factors
N-(2-ethylhexyl)isononan-1-amide	CAS No 93820-33-8 ECNo 298-613-3	10 – < 25	Aquatic Acute 1 / H400		

Hazardous ingredients					
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	M-Factors
propan-2-ol	CAS No 67-63-0 EC No 200-661-7 Index No 603-117-00-0	5 – < 10	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336		
quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides	CAS No 61789-80-8 EC No 263-090-2	5 – < 10	Eye Dam. 1 / H318 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410		
ethanol, 2-butoxy-, manufacture of, by-products from	CAS No 161907-77-3 EC No 310-287-7 REACH Reg. No 01-2119475115-41	5 – < 10	Eye Dam. 1 / H318		
fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized	EC No 931-216-1	1 – < 5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319		

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Take off immediately all contaminated clothing.

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

Following inhalation

Provide fresh air.

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

Following skin contact

Wash with plenty of soap and water.

If skin irritation occurs: Get medical advice/attention.

Following eye contact

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Remove contact lenses, if present and easy to do. Continue rinsing.

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

nitrogen oxides (NO_x), carbon monoxide (CO), carbon dioxide (CO₂), sulphur oxides (SO_x), hydrogen chloride (HCl)

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

use suitable breathing apparatus

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

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

Advices 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

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

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

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

heat

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Ventilation requirements

Provision of sufficient ventilation.

Packaging compatibilities

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

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)									
Country	Name of agent	CAS No	Notation	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Source
GB	propane-1,2-diol	57-55-6	particle	WEL		10			EH40/2005
GB	propane-1,2-diol	57-55-6	vp	WEL	150	474			EH40/2005
GB	propan-2-ol	67-63-0		WEL	400	999	500	1,250	EH40/2005

Notation

particle as airborne particles

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
N-(2-ethylhexyl)isononan-1-amide	93820-33-8	DNEL	8.8 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
N-(2-ethylhexyl)isononan-1-amide	93820-33-8	DNEL	2.5 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
propan-2-ol	67-63-0	DNEL	500 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
propan-2-ol	67-63-0	DNEL	888 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
ethanol, 2-butoxy-, manufacture of, by-products from	161907-77-3	DNEL	195 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
ethanol, 2-butoxy-, manufacture of, by-products from	161907-77-3	DNEL	208 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized		DNEL	44 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized		DNEL	312.5 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
N-(2-ethylhexyl)isononan-1-amide	93820-33-8	PNEC	1.57 µg/l	freshwater
N-(2-ethylhexyl)isononan-1-amide	93820-33-8	PNEC	0.157 µg/l	marine water
N-(2-ethylhexyl)isononan-1-amide	93820-33-8	PNEC	100 mg/l	sewage treatment plant (STP)
N-(2-ethylhexyl)isononan-1-amide	93820-33-8	PNEC	1.25 mg/kg	freshwater sediment
N-(2-ethylhexyl)isononan-1-amide	93820-33-8	PNEC	0.125 mg/kg	marine sediment

Relevant PNECs of components of the mixture				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
N-(2-ethylhexyl)isononan-1- amide	93820-33-8	PNEC	0.44 mg/kg	soil
propan-2-ol	67-63-0	PNEC	140.9 mg/l	water
propan-2-ol	67-63-0	PNEC	140.9 mg/l	marine water
propan-2-ol	67-63-0	PNEC	2,251 mg/l	sewage treatment plant (STP)
propan-2-ol	67-63-0	PNEC	552 mg/kg	freshwater sediment
propan-2-ol	67-63-0	PNEC	552 mg/kg	marine sediment
propan-2-ol	67-63-0	PNEC	140.9 mg/l	freshwater
propan-2-ol	67-63-0	PNEC	28 mg/kg	soil
ethanol, 2-butoxy-, manufac- ture of, by-products from	161907-77-3	PNEC	1.8 mg/l	freshwater
ethanol, 2-butoxy-, manufac- ture of, by-products from	161907-77-3	PNEC	0.18 mg/l	marine water
ethanol, 2-butoxy-, manufac- ture of, by-products from	161907-77-3	PNEC	500 mg/l	sewage treatment plant (STP)
ethanol, 2-butoxy-, manufac- ture of, by-products from	161907-77-3	PNEC	6.6 mg/kg	freshwater sediment
ethanol, 2-butoxy-, manufac- ture of, by-products from	161907-77-3	PNEC	0.66 mg/kg	marine sediment
ethanol, 2-butoxy-, manufac- ture of, by-products from	161907-77-3	PNEC	0.41 mg/kg	soil
fatty acids, C18 unsatd., reac- tion products with triethano- lamine, di-Me sulfate-quatern- ized		PNEC	0.002 mg/l	freshwater
fatty acids, C18 unsatd., reac- tion products with triethano- lamine, di-Me sulfate-quatern- ized		PNEC	0 mg/l	marine water
fatty acids, C18 unsatd., reac- tion products with triethano- lamine, di-Me sulfate-quatern- ized		PNEC	2.96 mg/l	sewage treatment plant (STP)
fatty acids, C18 unsatd., reac- tion products with triethano- lamine, di-Me sulfate-quatern- ized		PNEC	0.58 mg/kg	freshwater sediment

Relevant PNECs of components of the mixture				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized		PNEC	0.058 mg/kg	marine sediment
fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized		PNEC	0.115 mg/kg	soil

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

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

Wear suitable gloves.

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

Check leak-tightness/impermeability prior to use.

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

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/White).

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties
9.1 Information on basic physical and chemical properties**Appearance**

Physical state	liquid
Form	fluid
Colour	light yellow
Odour	characteristic
Odour threshold	these information are not available

Other safety parameters

pH (value)	6.1 (20 °C)
Melting point/freezing point	these information are not available
Initial boiling point and boiling range	these information are not available
Flash point	60.5 °C
Evaporation rate	these information are not available
Flammability (solid, gas)	not relevant (fluid)

Explosive limits

Lower explosion limit (LEL)	these information are not available
Upper explosion limit (UEL)	these information are not available
Vapour pressure	these information are not available
Density	0.93 – 0.99 g/cm ³ at 20 °C
Vapour density	these information are not available
Relative density	these information are not available

Solubility(ies)

Water solubility	miscible in any proportion
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Partition coefficient

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

Viscosity

Kinematic viscosity	these information are not available
Dynamic viscosity	these information are not available
Explosive properties	not explosive
Oxidising properties	shall not be classified as oxidising

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

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.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

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

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 toxicological effects

Classification procedure

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

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

Acute toxicity

Acute toxicity of components of the mixture						
Name of substance	CAS No	EC No	Exposure route	Endpoint	Value	Species
N-(2-ethylhexyl)isononan-1- amide	93820-33-8	298-613-3	oral	LD50	>2,000 mg/kg	rat
propan-2-ol	67-63-0	200-661-7	inhalation: vapour	LC50	>25 mg/l/4h	rat
propan-2-ol	67-63-0	200-661-7	oral	LD50	5,840 mg/kg	rat
propan-2-ol	67-63-0	200-661-7	dermal	LD50	13,400 mg/kg	rabbit
quaternary ammonium com- pounds, bis(hydrogenated tal- low alkyl)dimethyl, chlorides	61789-80-8	263-090-2	oral	LD50	>9,850 mg/kg	rat
ethanol, 2-butoxy-, manufac- ture of, by-products from	161907-77-3	310-287-7	oral	LD50	2,630 mg/kg	rat
ethanol, 2-butoxy-, manufac- ture of, by-products from	161907-77-3	310-287-7	dermal	LD50	3,540 mg/kg	rabbit
fatty acids, C18 unsatd., reac- tion products with triethano- lamine, di-Me sulfate-quat- ernized		931-216-1	oral	LD50	>2,000 mg/kg	rat
fatty acids, C18 unsatd., reac- tion products with triethano- lamine, di-Me sulfate-quat- ernized		931-216-1	dermal	LD50	>2,000 mg/kg	rat

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation**Skin sensitisation**

Classification could not be established because:

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

Respiratory sensitisation

Classification could not be established because:

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

Germ cell mutagenicity

Classification could not be established because:

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

Carcinogenicity

Classification could not be established because:

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

Reproductive toxicity

Classification could not be established because:

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

Specific target organ toxicity - single exposure

Classification could not be established because:

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

Specific target organ toxicity - repeated exposure

Classification could not be established because:

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

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity (acute)**

Test data are not available for the complete mixture.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	EC No	Endpoint	Value	Species	Exposure time
N-(2-ethylhexyl)isononan-1-amide	93820-33-8	298-613-3	LC50	>1,000 mg/l	zebra fish (Danio rerio)	96 h
N-(2-ethylhexyl)isononan-1-amide	93820-33-8	298-613-3	EC50	475 µg/l	daphnia magna	48 h
N-(2-ethylhexyl)isononan-1-amide	93820-33-8	298-613-3	ErC50	962 µg/l	algae (Desmodesmus subspicatus)	72 h
propan-2-ol	67-63-0	200-661-7	LC50	9,640 mg/l	fathead minnow (Pimephales promelas)	96 h
propan-2-ol	67-63-0	200-661-7	LC50	>10,000 mg/l	daphnia magna	24 h
quaternary ammonium compounds, bis(hydrogenated tal-low alkyl)dimethylchlorides	61789-80-8	263-090-2	LC50	0.62 – 2.17 mg/l	bluegill (Lepomis macrochirus)	96 h

Name of substance	CAS No	EC No	Endpoint	Value	Species	Exposure time
quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethylchlorides	61789-80-8	263-090-2	LC50	0.29 – 0.558 mg/l	fathead minnow (Pimephales promelas)	96 h
quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethylchlorides	61789-80-8	263-090-2	EC50	0.16 – 1.06 mg/l	daphnia magna	48 h
quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethylchlorides	61789-80-8	263-090-2	ErC50	0.21 mg/l	Grünalge (Selenastrum capricornutum)	96 h
ethanol, 2-butoxy-, manufacture of, by-products from	161907-77-3	310-287-7	LC50	>1,800 mg/l	turbot (Scophthalmus maximus)	96 h
ethanol, 2-butoxy-, manufacture of, by-products from	161907-77-3	310-287-7	EC50	>3,200 mg/l	daphnia magna	48 h
ethanol, 2-butoxy-, manufacture of, by-products from	161907-77-3	310-287-7	EC50	1,054 mg/l	algae (Scenedesmus capricornutum)	48 h
ethanol, 2-butoxy-, manufacture of, by-products from	161907-77-3	310-287-7	EC50	1,075 mg/l	algae (Scenedesmus capricornutum)	72 h
ethanol, 2-butoxy-, manufacture of, by-products from	161907-77-3	310-287-7	ErC50	1,686 mg/l	algae (Scenedesmus capricornutum)	48 h
fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized		931-216-1	LC50	4.8 mg/l	rainbow trout (Oncorhynchus mykiss)	96 h
fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized		931-216-1	EC50	1.9 mg/l	algae (Desmodesmus subspicatus)	72 h

Aquatic toxicity (chronic)

Toxic to aquatic life with long lasting effects.

Test data are not available for the complete mixture.

12.2 Persistence and degradability**Degradability of components of the mixture**

Name of substance	CAS No	EC No	Process	Degradation rate	Time
N-(2-ethylhexyl)isononan-1-amide	93820-33-8	298-613-3	carbon dioxide generation	81–94 %	28 d
propan-2-ol	67-63-0	200-661-7	oxygen depletion	53 %	5 d
quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides	61789-80-8	263-090-2	carbon dioxide generation	4.8 %	26 d
ethanol, 2-butoxy-, manufacture of, by-products from	161907-77-3	310-287-7	oxygen depletion	76 %	28 d
fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized		931-216-1	carbon dioxide generation	100 %	28 d

Biodegradation

Data are not available.

Persistence

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	EC No	BCF	Log KOW
N-(2-ethylhexyl)isononan-1-amide	93820-33-8	298-613-3	276.2	5.3
propan-2-ol	67-63-0	200-661-7		0.05 (25 °C)

Name of substance	CAS No	EC No	BCF	Log KOW
quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethylchlorides	61789-80-8	263-090-2	32	
ethanol, 2-butoxy-, manufacture of, by-products from	161907-77-3	310-287-7		0.436 (pH value: 6.6, 25.5 °C)

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

Data are not available.

Endocrine disrupting potential

None of the ingredients are listed.

Remarks

None.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number	3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name (hazardous ingredients)	N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE, DIALKYLDIMETHYLAMMONIUM CHLORIDE

14.3 Transport hazard class(es)

Class 9

14.4 Packing group

III

14.5 Environmental hazards

hazardous to the aquatic environment

Environmentally hazardous substance (aquatic environment)

N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE, DIALKYL-DIMETHYLAMMONIUM CHLORIDE

14.6 Special precautions for user

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

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

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

UN number 3082

Proper shipping name UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (contains: N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE, DIALKYL-DIMETHYLAMMONIUM CHLORIDE), 9, III, (-)

Class 9

Classification code M6

Packing group III

Danger label(s) 9, fish and tree



Environmental hazards yes
(hazardous to the aquatic environment)

Special provisions (SP) 274, 335, 375, 601

Excepted quantities (EQ) E1

Limited quantities (LQ) 5 L


Transport category (TC) 3.

Tunnel restriction code (TRC) -


Hazard identification No 90

Emergency Action Code 3Z

International Maritime Dangerous Goods Code (IMDG)

UN number	3082
Proper shipping name	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (contains: N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE, DIALKYLDIMETHYLAMMONIUM CHLORIDE), 9, III
Class	9
Marine pollutant	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	9, fish and tree
	
Special provisions (SP)	274, 335, 969
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-F
Stowage category	A

International Civil Aviation Organization (ICAO-IATA/DGR)

UN number	3082
Proper shipping name	UN3082, Environmentally hazardous substance, liquid, n.o.s., (contains: N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE, DIALKYLDIMETHYLAMMONIUM CHLORIDE), 9, III
Class	9
Environmental hazards	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	9, fish and tree
	
Special provisions (SP)	A97, A158, A197
Excepted quantities (EQ)	E1
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 of substance	Name acc. to inventory	CAS No	Type of registration	No
Curatech ES 461	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		1907/2006/EC annex XVII	3
N-(2-ethylhexyl)isononan-1-amide	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		1907/2006/EC annex XVII	3
quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, chlorides	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		1907/2006/EC annex XVII	3
ethanol, 2-butoxy-, manufacture of, by-products from	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		1907/2006/EC annex XVII	3
fatty acids, C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		1907/2006/EC annex XVII	3
propan-2-ol	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		1907/2006/EC annex XVII	3
propan-2-ol	flammable / pyrophoric		1907/2006/EC annex XVII	40

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

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

none of the ingredients are listed

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

none of the ingredients are listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

none of the ingredients are listed

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

none of the ingredients are listed

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Indication of changes: Section 2,3,14

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule

Abbr.	Descriptions of used abbreviations
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)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
log KOW	n-Octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

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

Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

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

International Maritime Dangerous Goods Code (IMDG).

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

Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

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

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

Code	Text
H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
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.

Disclaimer

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

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