Safety Data Sheet

acc. to Hazard communication of chemicals based on GHS-Labelling and

Safety Data Sheet (SDS) - Japanese Industrial Standard

ReduClean

Version number: 1.0 Date of compilation: 2026-07-07

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

1.1 Product identifier

Trade name **ReduClean**

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

Relevant identified uses: Cleaning agent to remove ReduSystems shading agents from horticultural greenhouses.
Industrial use

Uses advised against: Do not use for products which come into direct contact with the skin
Do not use for private purposes (household)

1.3 Details of the supplier of the safety data sheet

Lumiforte EMEA B.V.
Geerstraat 8
5111 PS Baarle-Nassau
Netherlands

Telephone: +31 (0)1 35 07 53 99
e-mail: safety@lumiforte.com
Website: www.lumiforte.com

1.4 Emergency telephone number

Emergency information service: +31 (0)1 35 07 53 99
This number is only available during the following office hours: Mon-Fri 09:00 - 17:00, CET: Central European Time

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Category	Hazard class and category	Hazard statement
2.16	substance or mixture corrosive to metals	1	Met. Corr. 1	H290
3.2	skin corrosion/irritation	1	Skin Corr. 1	H314
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318
3.8	specific target organ toxicity - single exposure	2	STOT SE 2	H371

For full text of H-phrases: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Immediate effects can be expected after short-term exposure.

2.2 Label elements

Labelling

- signal word: Danger

- pictograms

GHS05, GHS08



- hazard statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H371	May cause damage to organs (respiratory system).

- precautionary statements

P234	Keep only in original packaging.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
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

Contains: sodium hydroxide; Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.

2.3 Other hazards

Results of PBT and vPvB assessment

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

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at 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	Specific Conc. Limits
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	CAS No 51981-21-6	5 – < 10	Met. Corr. 1 / H290			
sodium hydroxide	CAS No 1310-73-2	1 – < 2.5	Met. Corr. 1 / H290 Skin Corr. 1 / H314 Eye Dam. 1 / H318 STOT SE 1 / H370 Aquatic Acute 3 / H402			
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	CAS No 85536-14-7	1 – < 2.5	Acute Tox. 4 / H302 Skin Corr. 1C / H314 Eye Dam. 1 / H318 Aquatic Acute 2 / H401 Aquatic Chronic 3 / H412			

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes	Specific Conc. Limits
Sodium p-cumenesulphonate	CAS No 15763-76-5	1 – < 2.5	Eye Irrit. 2 / H319			

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. Do not take off clothes. 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. Immediately call a POISON CENTER/doctor. In case of respiratory tract irritation, consult a physician.

Following skin contact

Rinse immediately contaminated clothing and skin with plenty of water before removing clothes, if possible. Immediately call a POISON CENTER/doctor.

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. Immediately call a POISON CENTER/doctor.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

4.2 Most important symptoms and effects, both acute and delayed

Redness. Pain. Causes severe skin burns and eye damage.

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; Foam; Dry extinguishing powder; Carbon dioxide (CO2); Sand;
Co-ordinate firefighting measures to the fire surroundings.

Unsuitable extinguishing media

Water jet.

5.2 Special hazards arising from the substance or mixture

Substance or mixture corrosive to metals.

Hazardous combustion products

During fire hazardous fumes/smoke could be produced. Carbon monoxide (CO). Carbon dioxide (CO2). Sulphur dioxide (SO2).

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 pre-

cautions from a reasonable distance.

Special protective equipment for firefighters

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

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Follow emergency procedures such as the need to evacuate the danger area or to consult an expert. 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. 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.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid binder, universal binder, sawdust).

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.

- handling of incompatible substances or mixtures

Do not mix with acids.

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

- corrosive conditions

Store in corrosive resistant container with a resistant inner liner.

- flammability hazards

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

- incompatible substances or mixtures

Keep away from: oxidising substances, acids, strong bases, strong acids, metals.

Control of effects

Protect against external exposure, such as

High temperatures. UV-radiation/sunlight. Frost.

Consideration of other advice

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

- packaging compatibilities

Stainless steel. Polyethylene.

- packaging incompatibilities

Tin, lead, copper, aluminium, magnesium, zinc,

7.3 Specific end use(s)

See section 1.2.

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**
JP	sodium hydroxide	1310-73-2	OEL						JSOH

Notation

STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs/DMELs/PNECs and other threshold levels

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**
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	DNEL	7.3 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	DNEL	15,000 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	DNEL	1.8 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	DNEL	7,500 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	DNEL	1.5 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
sodium hydroxide	1310-73-2	DNEL	1 mg/m³	human, inhalatory	worker (industry)	chronic - 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
sodium hydroxide	1310-73-2	DNEL	1 mg/m³	human, inhalatory	consumer (private households)	chronic - local effects
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	DNEL	7.6 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	DNEL	119 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	DNEL	1.3 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	DNEL	42.5 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	DNEL	0.425 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
Sodium p-cumenesulphonate	15763-76-5	DNEL	37.4 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Sodium p-cumenesulphonate	15763-76-5	DNEL	191 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Sodium p-cumenesulphonate	15763-76-5	DNEL	6.6 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
Sodium p-cumenesulphonate	15763-76-5	DNEL	68.1 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
Sodium p-cumenesulphonate	15763-76-5	DNEL	3.8 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects

Relevant PNECs of components

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	PNEC	9.45 mg/l	aquatic organisms	freshwater	short-term (single instance)
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	PNEC	0.945 mg/l	aquatic organisms	marine water	short-term (single instance)
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	PNEC	41.2 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	PNEC	4.12 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	PNEC	0.412 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	PNEC	0.5 mg/kg	terrestrial organisms	soil	short-term (single instance)
Benzenesulfonic	85536-14-7	PNEC	0.268 mg/l	aquatic organisms	freshwater	short-term (single

Relevant PNECs of components

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
acid, 4-C10-13-sec-alkyl derivs.						instance)
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	PNEC	0.027 mg/l	aquatic organisms	marine water	short-term (single instance)
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	PNEC	3.43 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	PNEC	8.1 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	PNEC	6.8 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	PNEC	35 mg/kg	terrestrial organ-isms	soil	short-term (single instance)
Sodium p-cumenes-ulphonate	15763-76-5	PNEC	0.1 mg/l	aquatic organisms	freshwater	short-term (single instance)
Sodium p-cumenes-ulphonate	15763-76-5	PNEC	0.01 mg/l	aquatic organisms	marine water	short-term (single instance)
Sodium p-cumenes-ulphonate	15763-76-5	PNEC	100 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Sodium p-cumenes-ulphonate	15763-76-5	PNEC	0.372 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Sodium p-cumenes-ulphonate	15763-76-5	PNEC	0.037 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Sodium p-cumenes-ulphonate	15763-76-5	PNEC	0.016 mg/kg	terrestrial organ-isms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation. Provide eyewash stations and safety showers at the workplace.

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection Wear face-shield.

Skin protection



Chemical protective clothing.

Hand protection



Wear suitable gloves. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. 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

PVC: polyvinyl chloride, NR: natural rubber, latex, Nitrile rubber, Butyl rubber

- material thickness

Use gloves with a minimum material thickness:
PVC: polyvinyl chloride, NR: natural rubber, latex, Butyl rubber: ≥ 0,5 mm.
Nitrile rubber: > 0,35mm.

- 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.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Type: ABEK-P2 (combined filters against gases, vapours and particles, colour code: Brown/Grey/Yellow/Green/White).

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
Colour	colourless
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	100 °C calculated value, referring to a component of the mixture
Evaporation rate	not determined
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	LEL: UEL: not determined
Flash point	no data available
Auto-ignition temperature	380 °C (auto-ignition temperature (liquids and gases)) calculated value, referring to a component of the mixture
Decomposition temperature	no data available
pH (value)	13 (base)
Kinematic viscosity	1,455 mm^2/s at 20 °C
Solubility	not determined

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

Vapour pressure	2.3 kPa at 20 °C calculated value, referring to a component of the mixture

Density and/or relative density

Density	1.1 $^{g}/_{cm^3}$
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	there is no additional information
Other safety characteristics	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

Substance or mixture corrosive to metals. Reacts with: acids, Ammonium salts, halogenated hydrocarbons.

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

Ammonium salts. Reacts with most metals in the presence of moisture, releasing hydrogen, a highly flammable gas.

10.4 Conditions to avoid

UV-radiation/sunlight. Extremely high or low temperatures.

10.5 Incompatible materials

Oxidisers. Strong acids. Strong bases. Metals.

Release of flammable materials with:

Light metals (due to the release of hydrogen in an acid/alkaline medium)

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

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 acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components			
Name of substance	**CAS No**	**Exposure route**	**ATE**
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	oral	1,470 $^{mg}/_{kg}$

Acute toxicity of components					
Name of substance	**CAS No**	**Exposure route**	**Endpoint**	**Value**	**Species**
Tetrasodium N,N-bis(carboxylato-methyl)-L-glutamate	51981-21-6	oral	LD50	>2,000 $^{mg}/_{kg}$	rat
Tetrasodium N,N-bis(carboxylato-methyl)-L-glutamate	51981-21-6	dermal	LD50	>2,000 $^{mg}/_{kg}$	rat
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	oral	LD50	1,470 $^{mg}/_{kg}$	rat
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	dermal	LD50	>2,000 $^{mg}/_{kg}$	rat
Sodium p-cumenesulphonate	15763-76-5	oral	LD50	>6,720 $^{mg}/_{kg}$	rat
Sodium p-cumenesulphonate	15763-76-5	dermal	LD50	>2,000 $^{mg}/_{kg}$	rabbit

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

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 damage to organs (respiratory system).

Hazard category	Target organ	Exposure route
2	respiratory system	if exposed

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.

Other information

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

11.2 Information on other hazards

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	LC50	>100 mg/l	rainbow trout (Oncorhynchus mykiss)	96 h
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	EC50	>100 mg/l	daphnia magna	48 h
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	NOEC	≥100 mg/l	green algae (Desmodesmus subspicatus)	72 h
sodium hydroxide	1310-73-2	LC50	<180 mg/l	fish	96 h
sodium hydroxide	1310-73-2	EC50	40.4 mg/l	water flea (Daphnia)	48 h
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	LC50	2.88 mg/l	fathead minnow (Pimephales promelas)	96 h
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	EC50	2.9 mg/l	daphnia magna	48 h
Sodium p-cumenesulphonate	15763-76-5	ErC50	252 mg/l	algae	72 h
Sodium p-cumenesulphonate	15763-76-5	LC50	≥252 mg/l	zebra fish (Danio rerio)	96 h
Sodium p-cumenesulphonate	15763-76-5	EC50	>304 mg/l	daphnia magna	48 h
Sodium p-cumenesulphonate	15763-76-5	NOEC	31 mg/l	algae	96 h

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	EC50	380.1 mg/l	aquatic invertebrates	21 d
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	NOEC	103 mg/l	zebra fish (Danio rerio)	9 d
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	LOEC	227 mg/l	zebra fish (Danio rerio)	9 d
Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6	growth (EbCx) 10%	125 mg/l	zebra fish (Danio rerio)	9 d
sodium hydroxide	1310-73-2	EC50	22 mg/l	microorganisms	15 min
sodium hydroxide	1310-73-2	growth (EbCx) 10%	161 mg/l	microorganisms	2 min
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	EC50	1.5 mg/l	daphnia magna	21 d
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	LC50	1.67 mg/l	daphnia magna	21 d
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.	85536-14-7	NOEC	0.23 mg/l	rainbow trout (Oncorhynchus mykiss)	72 d
Sodium p-cumenesulphonate	15763-76-5	growth (EbCx) 10%	≥1,000 mg/l	microorganisms	3 h

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at 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

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Relevant provisions relating to waste (Basel Convention)

Properties of waste which render it hazardous

H8 Corrosives

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

UN RTDG	UN 1760
IMDG-Code	UN 1760
ICAO-TI	UN 1760

14.2 UN proper shipping name

UN RTDG	CORROSIVE LIQUID, N.O.S.
IMDG-Code	CORROSIVE LIQUID, N.O.S.
ICAO-TI	Corrosive liquid, n.o.s.
Technical name (Hazardous ingredients)	Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate, sodium hydroxide

14.3 Transport hazard class(es)

UN RTDG	8
IMDG-Code	8
ICAO-TI	8

14.4 Packing group

UN RTDG	III
IMDG-Code	III
ICAO-TI	III

14.5 Environmental hazards

Non-environmentally hazardous acc. to the dangerous goods regulations.

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to IMO instruments

No data available.

Additional information for each of the UN Model Regulations

Transport information - national regulations - additional information (UN RTDG)

UN number	1760
Class	8
Packing group	III
Danger label(s)	8



Special provisions (SP)	223, 274 (UN RTDG)
Excepted quantities (EQ)	E1 (UN RTDG)
Limited quantities (LQ)	5 L (UN RTDG)

International Maritime Dangerous Goods Code (IMDG) - additional information

Marine pollutant	-
Danger label(s)	8



Special provisions (SP)	223, 274
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-B
Stowage category	A

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

Danger label(s)	8



Special provisions (SP)	A3
Excepted quantities (EQ)	E1
Limited quantities (LQ)	1 L

SECTION 15: Regulatory information

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

There is no additional information.

National regulations (Japan)

Industrial Safety and Health Act

Name of substance	CAS No	CHRIP-ID	MITI No	ISHA No.	Source
sodium hydroxide	1310-73-2	C004-694-14A	1-410		CSD-IPE
sodium hydroxide	1310-73-2	C004-694-14A	1-410		CSR-LDD
sodium p-cumenesulphonate	15763-76-5	C007-506-23A	3-3875	4-(5)-556	ISHA-ECS

Legend

CSD-IPE	Chemical substances that cause skin disorders, etc. and other chemical substances that must be handled with impermeable protective equipment etc. based on special chemical regulations.
CSR-LDD	Chemical Substances Requiring Labeling and Delivery of Documents, etc.
ISHA-ECS	ISHA: Existing Chemical Substances

List of Existing and New Chemical Substances (CSCL-ENCS)

All ingredients are listed or exempt from listing.

Poisonous and Deleterious Substances Control Act

Name of substance	CAS No	CHRIP-ID	Classification	Law/Cabinet
sodium hydroxide	1310-73-2	C004-694-14A	劇物	政令
sodium hydroxide	1310-73-2	C004-694-14A	劇物	法律

Legend

劇物	Deleterious Substances
政令	Cabinet order
法律	Law

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CSD-IPE	Chemical substances that cause skin disorders, etc. and other chemical substances that must be handled with impermeable protective equipment etc. based on special chemical regulations.
CSR-LDD	Chemical Substances Requiring Labeling and Delivery of Documents, etc.
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
ED	Endocrine disruptor
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
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
ISHA	Industrial Safety and Health Act
ISHA-ECS	ISHA: Existing Chemical Substances
JSOH	Japan Society of Occupational Health "Journal of Occupational Health": Recommendation of Occupational Exposure Limits
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)
LOEC	Lowest Observed Effect Concentration
Met. Corr.	Substance or mixture corrosive to metals
NOEC	No Observed Effect Concentration
OEL	Workplace exposure limit

Abbr.	Descriptions of used abbreviations
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
TWA	Time-weighted average
UEL	Upper explosion limit (UEL)
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Classification of chemicals based on Globally Harmonized System of Classification and Labelling of Chemicals (GHS) (JISZ7252). Hazard communication of chemicals based on GHS-Labelling and Safety Data Sheet (SDS) - Japanese Industrial Standard. JIS Z7253-2019.

UN Recommendations on the Transport of Dangerous Good. 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
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H370	Causes damage to organs (respiratory system).
H371	May cause damage to organs (respiratory system).
H401	Toxic to aquatic life.
H402	Harmful to aquatic life.
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.