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Revision date / version: 04.03.2024 / 0004  
Replacing version dated / version: 04.08.2023 / 0003  
Valid from: 04.03.2024  
PDF print date: 08.03.2024  
Marine Antikalk  
Marine Anti-Limescale

## Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### 1.1 Product identifier

**Marine Antikalk**  
**Marine Anti-Limescale**

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

**Relevant identified uses of the substance or mixture:**

Cleaner

**Uses advised against:**

No information available at present.

#### 1.3 Details of the supplier of the safety data sheet

LIQUI MOLY GmbH  
Jerg-Wieland-Str. 4  
89081 Ulm-Lehr  
Tel.: (+49) 0731-1420-0  
Fax: (+49) 0731-1420-88

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

#### 1.4 Emergency telephone number

**Emergency information services / official advisory body:**

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**Telephone number of the company in case of emergencies:**

+49 (0) 700 / 24 112 112 (LMR)  
+1 872 5888271 (LMR)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) 1272/2008 (CLP)**

Hazard class	Hazard category	Hazard statement
Eye Dam.	1	H318-Causes serious eye damage.
Aquatic Chronic	3	H412-Harmful to aquatic life with long lasting effects.
Skin Corr.	1	H314-Causes severe skin burns and eye damage.

#### 2.2 Label elements

**Labeling according to Regulation (EC) 1272/2008 (CLP)**

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Danger

H412-Harmful to aquatic life with long lasting effects. H314-Causes severe skin burns and eye damage.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.  
 P260-Do not breathe vapours or spray. P273-Avoid release to the environment. 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.  
 P405-Store locked up.  
 P501-Dispose of contents / container to an approved waste disposal facility.

Sulphamidic acid

### 2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

n.a.

### 3.2 Mixtures

Sulphamidic acid	
Registration number (REACH)	01-2119846728-23-XXXX
Index	016-026-00-0
EINECS, ELINCS, NLP, REACH-IT List-No.	226-218-8
CAS	5329-14-6
content %	10-<25
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 3, H412

2,2'-(octadec-9-enylimino)bisethanol	
Registration number (REACH)	01-2119510876-35-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	246-807-3
CAS	25307-17-9
content %	0,1-<0,25

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<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1)
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For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.  
The substances named in this section are given with their actual, appropriate classification!  
For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.  
The addition of the highest concentrations listed here can result in a classification. Only when this classification is listed in Section 2 does it apply. In all other cases the total concentration is below the classification.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

First-aiders should ensure they are protected!  
Never pour anything into the mouth of an unconscious person!

#### Inhalation

Supply person with fresh air and consult doctor according to symptoms.

#### Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

Cauterizations not treated lead to wounds difficult to heal.

#### Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.

Protect uninjured eye.

Follow-up examination by an ophthalmologist.

#### Ingestion

Rinse the mouth thoroughly with water.

Do not induce vomiting - give copious water to drink. Consult doctor immediately.

### 4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

Corrosive burns on skin as well as mucous membrane possible.

Necrosis

Risk of serious damage to eyes.

Corneal damage.

Danger of blindness.

Ingestion:

pain in the mouth and throat

gastrointestinal disturbances

Oesophageal perforation

Gastric perforation

### 4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Water jet spray/foam/CO<sub>2</sub>/dry extinguisher

#### Unsuitable extinguishing media

High volume water jet

### 5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

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Oxides of sulphur  
Oxides of nitrogen  
Toxic gases

### 5.3 Advice for firefighters

For personal protective equipment see Section 8.  
In case of fire and/or explosion do not breathe fumes.  
Protective respirator with independent air supply.  
According to size of fire  
Full protection, if necessary.  
Dispose of contaminated extinction water according to official regulations.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### 6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.  
Ensure sufficient ventilation, remove sources of ignition.  
Avoid dust formation with solid or powder products.  
Leave the danger zone if possible, use existing emergency plans if necessary.  
Keep unprotected persons away.  
Avoid contact with eyes or skin.  
If applicable, caution - risk of slipping.

#### 6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

### 6.2 Environmental precautions

If leakage occurs, dam up.  
Resolve leaks if this possible without risk.  
Prevent surface and ground-water infiltration, as well as ground penetration.  
Prevent from entering drainage system.  
If accidental entry into drainage system occurs, inform responsible authorities.

### 6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.  
Fill the absorbed material into lockable containers.  
Flush residue using copious water.

### 6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

## SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

### 7.1 Precautions for safe handling

#### 7.1.1 General recommendations

Ensure good ventilation.  
Avoid contact with eyes or skin.  
Handle and open container with care.  
There should be an eyewash station and safety shower located near the area of use.  
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.  
Observe directions on label and instructions for use.  
Use working methods according to operating instructions.

#### 7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.  
Wash hands before breaks and at end of work.  
Keep away from food, drink and animal feedingstuffs.  
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.  
Store product closed and only in original packing.  
Not to be stored in gangways or stair wells.

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Under all circumstances prevent penetration into the soil.  
 Do not store with alkalis.  
 Do not use acid sensitive materials.  
 Store at room temperature.

### 7.3 Specific end use(s)

No information available at present.

Observe the instructions for good working practice and the recommendations for risk assessment.

Consult hazardous substance information systems, e.g. from the professional associations, the chemical industry or different industries, depending on the application (building materials, wood, chemistry, laboratory, leather, metal).

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Sulphamidic acid						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	1,8	mg/l	
	Environment - marine		PNEC	0,18	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	0,48	mg/l	
	Environment - sewage treatment plant		PNEC	20	mg/l	
	Environment - sediment, freshwater		PNEC	8,36	mg/kg dw	
	Environment - sediment, marine		PNEC	0,84	mg/kg dw	
	Environment - soil		PNEC	5	mg/kg dw	
Consumer	Human - oral	Long term, systemic effects	DNEL	5	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	17,4	mg/m <sup>3</sup>	
Consumer	Human - dermal	Long term, systemic effects	DNEL	5	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	70,5	mg/m <sup>3</sup>	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	10	mg/kg bw/day	

2,2'-(octadec-9-enylimino)bisethanol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,000214	mg/l	
	Environment - sediment, marine		PNEC	0,0171	mg/kg dw	
	Environment - sediment, freshwater		PNEC	0,171	mg/kg dw	
	Environment - water, sporadic (intermittent) release		PNEC	0,00087	mg/l	
	Environment - sewage treatment plant		PNEC	1,5	mg/l	
	Environment - soil		PNEC	5	mg/kg dw	

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	Environment - oral (animal feed)		PNEC	2	mg/kg	
	Environment - marine		PNEC	0,00002 1	mg/l	
	Environment - sediment, freshwater		PNEC	1,692	mg/kg dw	
	Environment - sediment, marine		PNEC	0,1692	mg/kg dw	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,179	mg/kg bw/d	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,179	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,621	mg/m <sup>3</sup>	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,25	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	1,76	mg/m <sup>3</sup>	

## 8.2 Exposure controls

### 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.  
 If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.  
 Applies only if maximum permissible exposure values are listed here.

### 8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.  
 Wash hands before breaks and at end of work.  
 Keep away from food, drink and animal feedingstuffs.  
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:  
 Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:  
 Use acid resistant protective gloves (EN ISO 374).  
 If applicable  
 Protective gloves made of butyl (EN ISO 374).  
 Protective Neoprene® / polychloroprene gloves (EN ISO 374).  
 Protective nitrile gloves (EN ISO 374).  
 Protective PVC gloves (EN ISO 374).  
 Minimum layer thickness in mm:  
 0,5  
 Permeation time (penetration time) in minutes:  
 480  
 The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.  
 The recommended maximum wearing time is 50% of breakthrough time.  
 Protective hand cream recommended.

Skin protection - Other:  
 Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:  
 Normally not necessary.

Thermal hazards:  
 Not applicable

Additional information on hand protection - No tests have been performed.  
 In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.  
 Selection of materials derived from glove manufacturer's indications.  
 Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

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Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

### 8.2.3 Environmental exposure controls

No information available at present.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Red
Odour:	Characteristic
Melting point/freezing point:	There is no information available on this parameter.
Boiling point or initial boiling point and boiling range:	There is no information available on this parameter.
Flammability:	There is no information available on this parameter.
Lower explosion limit:	There is no information available on this parameter.
Upper explosion limit:	There is no information available on this parameter.
Flash point:	n.a.
Auto-ignition temperature:	There is no information available on this parameter.
Decomposition temperature:	There is no information available on this parameter.
pH:	0,1
Kinematic viscosity:	1,5 mm <sup>2</sup> /s (40°C)
Solubility:	Soluble
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	There is no information available on this parameter.
Density and/or relative density:	1,079 g/ml (20°C)
Relative vapour density:	There is no information available on this parameter.
Particle characteristics:	Does not apply to liquids.

### 9.2 Other information

No information available at present.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The product has not been tested.

### 10.2 Chemical stability

Stable with proper storage and handling.

### 10.3 Possibility of hazardous reactions

Avoid contact with strong alkalis (exothermic reaction possible).

### 10.4 Conditions to avoid

None known

### 10.5 Incompatible materials

Avoid contact with strong alkalis.

Avoid contact with strong oxidizing agents.

Avoid contact with acid sensitive materials.

### 10.6 Hazardous decomposition products

No decomposition when used as directed.

## SECTION 11: Toxicological information

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

Possibly more information on health effects, see Section 2.1 (classification).

Marine Antikalk

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Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.

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Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Sulphamidic acid						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Irritant(IUCLID)
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative(IUCLID)
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Reproductive toxicity (Developmental toxicity):	NOAEL	200	mg/kg bw/d	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	1000	mg/kg	Rat		(oral, 90 h)
Aspiration hazard:						No
Symptoms:						respiratory distress, coughing, mucous membrane irritation

2,2'-(octadec-9-enylimino)bisethanol						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1260	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by oral route:	LD50	1350	mg/kg	Rat		
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Skin Corr. 1B
Serious eye damage/irritation:						Eye Dam. 1
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative





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12.2. Persistence and degradability:							The surfactant(s) contained in this mixture complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Endocrine disrupting properties:							Does not apply to mixtures.
12.7. Other adverse effects:							No information available on other adverse effects on the environment.
Other information:							DOC-elimination degree(complexing organic substance) $\geq$ 80%/28d: No
Other information:	AOX			%			According to the recipe, contains no AOX.

Sulphamic acid							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	70,3	mg/l	Pimephales promelas	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	34d	$\geq$ 60	mg/l	Brachydanio rerio	OECD 210 (Fish, Early-Life Stage Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	71,6	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	19	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	IC50	72h	$>$ 29	mg/l	Chlorella vulgaris		

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12.1. Toxicity to algae:	ErC50	72h	48	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:							Not biodegradable, Not relevant for inorganic substances.
12.3. Bioaccumulative potential:	Log Pow		-4,34				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	3h	>200	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Water solubility:			213	g/l			20°C

**2,2'-(octadec-9-enylimino)bisethanol**

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	0,1	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	0,043	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	0,0867	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	>60	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable
12.3. Bioaccumulative potential:	BCF		234				
12.4. Mobility in soil:	Koc		90520			OECD 106 (Adsorption/Desorption Using a Batch Equilibrium Method)	
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	3h	128	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other organisms:	NOEC/NOEL	56d	500	mg/kg dw	Eisenia foetida	OECD 222 (Earthworm Reproduction Test (Eisenia foetida/Eisenia andrei))	

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

20 01 29 detergents containing hazardous substances

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

E.g. suitable incineration plant.

E.g. dispose at suitable refuse site.

#### For contaminated packing material

Pay attention to local and national official regulations.

Empty container completely.


Uncontaminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.


## SECTION 14: Transport information

### General statements


#### Transport by road/by rail (ADR/RID)

14.1. UN number or ID number:	1760	
14.2. UN proper shipping name:		
UN 1760 CORROSIVE LIQUID, N.O.S. (SULPHAMIC ACID)		
14.3. Transport hazard class(es):	8	
14.4. Packing group:	III	
14.5. Environmental hazards:	Not applicable	
Tunnel restriction code:	E	
Classification code:	C9	
LQ:	5 L	
Transport category:	3	

#### Transport by sea (IMDG-code)

14.1. UN number or ID number:	1760	
14.2. UN proper shipping name:		
UN 1760 CORROSIVE LIQUID, N.O.S. (SULPHAMIC ACID)		
14.3. Transport hazard class(es):	8	
14.4. Packing group:	III	
14.5. Environmental hazards:	Not applicable	
Marine Pollutant:	Not applicable	
EmS:	F-A, S-B	

#### Transport by air (IATA)

14.1. UN number or ID number:	1760	
14.2. UN proper shipping name:		
UN 1760 Corrosive liquid, n.o.s. (SULPHAMIC ACID)		
14.3. Transport hazard class(es):	8	
14.4. Packing group:	III	
14.5. Environmental hazards:	Not applicable	

#### 14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.

All persons involved in transporting must observe safety regulations.

Precautions must be taken to prevent damage.

#### 14.7. Maritime transport in bulk according to IMO instruments

Freighted as packaged goods rather than in bulk, therefore not applicable.

Minimum amount regulations have not been taken into account.

Danger code and packing code on request.

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Comply with special provisions.

## SECTION 15: Regulatory information

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

Observe restrictions:

Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!  
 Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC): < 0,1 %

#### **REGULATION (EC) No 648/2004**

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National rules/regulation for the compliance with maximum quantities with regard to phosphates and or phosphorous compounds must be observed and complied with.

National requirements/regulations on safety and health protection must be applied when using work equipment.

### 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

Revised sections: 2

Employee training in handling dangerous goods is required.  
 These details refer to the product as it is delivered.  
 Employee instruction/training in handling hazardous materials is required.

### Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Eye Dam. 1, H318	Classification based on the pH value.
Aquatic Chronic 3, H412	Classification according to calculation procedure.
Skin Corr. 1, H314	Classification based on the pH value.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents.

H302 Harmful if swallowed.  
 H314 Causes severe skin burns and eye damage.  
 H315 Causes skin irritation.  
 H318 Causes serious eye damage.  
 H319 Causes serious eye irritation.  
 H400 Very toxic to aquatic life.  
 H410 Very toxic to aquatic life with long lasting effects.  
 H412 Harmful to aquatic life with long lasting effects.

Eye Dam. — Serious eye damage  
 Aquatic Chronic — Hazardous to the aquatic environment - chronic  
 Skin Corr. — Skin corrosion  
 Skin Irrit. — Skin irritation  
 Eye Irrit. — Eye irritation  
 Acute Tox. — Acute toxicity - oral  
 Aquatic Acute — Hazardous to the aquatic environment - acute

### Key literature references and sources for data:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.

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Guidelines for the preparation of safety data sheets as amended (ECHA).  
 Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).  
 Safety data sheets for the constituent substances.  
 ECHA Homepage - Information about chemicals.  
 GESTIS Substance Database (Germany).  
 German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).  
 EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.  
 National Lists of Occupational Exposure Limits for each country as amended.  
 Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

### Any abbreviations and acronyms used in this document:

acc., acc. to according, according to  
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 AOX Adsorbable organic halogen compounds  
 approx. approximately  
 Art., Art. no. Article number  
 ASTM ASTM International (American Society for Testing and Materials)  
 ATE Acute Toxicity Estimate  
 BAM Bundesanstalt für Materialforschung und -prüfung (= Federal Institute for Materials Research and Testing, Germany)  
 BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)  
 BCF Bioconcentration factor  
 BSEF The International Bromine Council  
 CAS Chemical Abstracts Service  
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)  
 CMR carcinogenic, mutagenic, reproductive toxic  
 DMEL Derived Minimum Effect Level  
 DNEL Derived No Effect Level  
 DOC Dissolved organic carbon  
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance  
 EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)  
 EC European Community  
 ECHA European Chemicals Agency  
 ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect  
 EEC European Economic Community  
 EINECS European Inventory of Existing Commercial Chemical Substances  
 ELINCS European List of Notified Chemical Substances  
 EN European Norms  
 EPA United States Environmental Protection Agency (United States of America)  
 ErCx, EµCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)  
 etc. et cetera  
 EU European Union  
 EVAL Ethylene-vinyl alcohol copolymer  
 Fax. Fax number  
 gen. general  
 GHS Globally Harmonized System of Classification and Labelling of Chemicals  
 GWP Global warming potential  
 Koc Adsorption coefficient of organic carbon in the soil  
 Kow octanol-water partition coefficient  
 IARC International Agency for Research on Cancer  
 IATA International Air Transport Association  
 IBC (Code) International Bulk Chemical (Code)  
 IMDG-code International Maritime Code for Dangerous Goods  
 incl. including, inclusive  
 IUCLID International Uniform Chemical Information Database  
 IUPAC International Union for Pure Applied Chemistry  
 LC50 Lethal Concentration to 50 % of a test population  
 LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)  
 Log Koc Logarithm of adsorption coefficient of organic carbon in the soil

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Log Kow, Log Pow            Logarithm of octanol-water partition coefficient  
LQ            Limited Quantities  
MARPOL            International Convention for the Prevention of Marine Pollution from Ships  
mg/kg bw            mg/kg body weight  
mg/kg bw/d, mg/kg bw/day    mg/kg body weight/day  
mg/kg dw            mg/kg dry weight  
mg/kg wwt            mg/kg wet weight  
n.a.            not applicable  
n.av.            not available  
n.c.            not checked  
n.d.a.            no data available  
NIOSH            National Institute for Occupational Safety and Health (USA)  
NLP            No-longer-Polymer  
NOEC, NOEL            No Observed Effect Concentration/Level  
OECD            Organisation for Economic Co-operation and Development  
org.            organic  
OSHA            Occupational Safety and Health Administration (USA)  
PBT            persistent, bioaccumulative and toxic  
PE            Polyethylene  
PNEC            Predicted No Effect Concentration  
ppm            parts per million  
PVC            Polyvinylchloride  
REACH            Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)  
REACH-IT List-No.            6/7/8/9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.  
RID            Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)  
SVHC            Substances of Very High Concern  
Tel.            Telephone  
TOC            Total organic carbon  
UN RTDG            United Nations Recommendations on the Transport of Dangerous Goods  
VOC            Volatile organic compounds  
vPvB            very persistent and very bioaccumulative

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.

These statements were made by:

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