

**Safety data sheet**  
**according to Regulation (EC) No 1907/2006, Annex II (last amended by**  
**Regulation (EU) 2020/878)**

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

**1.1 Product identifier**

**Reactive Rust Remover**  
**Art.: 359999**

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

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

Rust solvent

**Uses advised against:**

No information available at present.

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

Koch-Chemie GmbH  
Einsteinstrasse 42  
59423 Unna  
Telefon: +49 (0) 2303 / 9 86 70 - 0  
Fax: +49 (0) 2303 / 9 86 70 - 26  
info@koch-chemie.com  
www.koch-chemie.com

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:**

IRL

National Poisons Information Centre, Beaumont Hospital, Dublin 9, Ireland, Tel.:  
+353 (0)1 809 2166 (Public Poisons Info Line, 8am-10pm, 7 days a week)  
+353 (0)1 809 2566 (Info for Healthcare Professionals ONLY, 24 h, 7 days a week)

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

+1 872 5888271 (KCC)

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

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

<b>Hazard class</b>	<b>Hazard category</b>	<b>Hazard statement</b>
Acute Tox.	4	H302-Harmful if swallowed.
Eye Irrit.	2	H319-Causes serious eye irritation.
Skin Sens.	1	H317-May cause an allergic skin reaction.
Met. Corr.	1	H290-May be corrosive to metals.

## 2.2 Label elements

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



Warning

H302-Harmful if swallowed. H319-Causes serious eye irritation. H317-May cause an allergic skin reaction. H290-May be corrosive to metals.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.

P261-Avoid breathing vapours or spray. P280-Wear protective gloves / eye protection / face protection.

P314-Get medical advice / attention if you feel unwell. P390-Absorb spillage to prevent material damage.

P405-Store locked up.

P501-Dispose of contents / container to an approved waste disposal facility.

Benzaldehyde

Ammonium mercaptoacetate

## 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

Ammonium mercaptoacetate	
Registration number (REACH)	01-2119531489-31-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	226-540-9
CAS	5421-46-5
content %	20-<30
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Met. Corr. 1, H290 Acute Tox. 3, H301 Skin Sens. 1B, H317
Specific Concentration Limits and ATE	ATE (oral): 71 mg/kg

Alcohols, C12-14, ethoxylated, sulfates, sodium salts	
Registration number (REACH)	01-2119488639-16-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	500-234-8
CAS	68891-38-3
content %	5-<10

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<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412
<b>Specific Concentration Limits and ATE</b>	Eye Dam. 1, H318: >=10 % Eye Irrit. 2, H319: >=5 %

<b>Sodium p-cumenesulphonate</b>	
<b>Registration number (REACH)</b>	01-2119489411-37-XXXX
<b>Index</b>	---
<b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>	239-854-6
<b>CAS</b>	15763-76-5
<b>content %</b>	1-<2,5
<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Eye Irrit. 2, H319

<b>Benzaldehyde</b>	
<b>Registration number (REACH)</b>	01-2119455540-44-XXXX
<b>Index</b>	605-012-00-5
<b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>	202-860-4
<b>CAS</b>	100-52-7
<b>content %</b>	1-<2,5
<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Acute Tox. 4, H302
<b>Specific Concentration Limits and ATE</b>	ATE (oral): 1300 mg/kg

<b>Bronopol (INN)</b>	
<b>Registration number (REACH)</b>	---
<b>Index</b>	603-085-00-8
<b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>	200-143-0
<b>CAS</b>	52-51-7
<b>content %</b>	<0,1
<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1)
<b>Specific Concentration Limits and ATE</b>	ATE (oral): 305 mg/kg ATE (dermal): 1100 mg/kg

Impurities, test data and additional information may have been taken into account in classifying and labelling the product.

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

Remove person from danger area.

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.

#### **Eye contact**

Remove contact lenses.

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

#### **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.

eyes, reddened

Watering eyes

reddening of the skin

Allergic reaction

#### **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**

Adapt to the nature and extent of fire.

Water jet spray/foam/CO2/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

Oxides of nitrogen

Oxides of sulphur

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.

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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.

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.

Store at room temperature.

Store in a dry place.

Protect from frost.

### 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

Ammonium mercaptoacetate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - marine		PNEC	0,0038	mg/l	
	Environment - freshwater		PNEC	0,038	mg/l	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	2,06	mg/kg	
Workers / employees	Human - dermal	Long term, local effects	DNEL	0,004	mg/cm <sup>2</sup>	

**Alcohols, C12-14, ethoxylated, sulfates, sodium salts**

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,24	mg/l	
	Environment - periodic release		PNEC	0,13	mg/l	
	Environment - marine		PNEC	0,024	mg/l	
	Environment - sediment, marine		PNEC	0,0917	mg/kg dry weight	
	Environment - sewage treatment plant		PNEC	10000	mg/l	
	Environment - soil		PNEC	0,946	mg/kg dry weight	
	Environment - sporadic (intermittent) release		PNEC	0,071	mg/l	
	Environment - sediment, freshwater		PNEC	0,917	mg/kg	
	Environment - sediment, marine		PNEC	0,092	mg/kg	
	Environment - soil		PNEC	7,5	mg/kg	
Consumer	Human - dermal	Long term, local effects	DNEL	0,079	mg/cm2	
Consumer	Human - oral	Long term, systemic effects	DNEL	15	mg/kg bw/day	
Consumer	Human - dermal	Long term, systemic effects	DNEL	1650	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	52	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	2750	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	175	mg/m3	
Workers / employees	Human - dermal	Long term, local effects	DNEL	0,132	mg/cm2	

**Sodium p-cumenesulphonate**

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,1	mg/l	
	Environment - sporadic (intermittent) release		PNEC	1	mg/l	
	Environment - sewage treatment plant		PNEC	100	mg/l	
	Environment - marine		PNEC	0,023	mg/l	
	Environment - sediment, freshwater		PNEC	0,862	mg/kg dw	
	Environment - sediment, marine		PNEC	0,086	mg/kg dw	
	Environment - soil		PNEC	0,037	mg/kg dw	
Consumer	Human - dermal	Long term, local effects	DNEL	0,048	mg/cm2	
Consumer	Human - oral	Long term, systemic effects	DNEL	3,8	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	68,1	mg/kg bw/day	

Consumer	Human - inhalation	Long term, systemic effects	DNEL	6,6	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	3,8	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	7,6	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	37,4	mg/m3	
Workers / employees	Human - dermal	Long term, local effects	DNEL	0,096	mg/cm2	

<b>Bronopol (INN)</b>						
<b>Area of application</b>	<b>Exposure route / Environmental compartment</b>	<b>Effect on health</b>	<b>Descriptor</b>	<b>Value</b>	<b>Unit</b>	<b>Note</b>
	Environment - freshwater		PNEC	0,01	mg/l	
	Environment - marine		PNEC	0,001	mg/kg	
	Environment - sewage treatment plant		PNEC	0,43	mg/l	
	Environment - sediment, freshwater		PNEC	0,041	mg/kg dw	
	Environment - sediment, marine		PNEC	0,00328	mg/kg dw	
	Environment - soil		PNEC	0,5	mg/kg dw	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	1,2	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	1,3	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	1,4	mg/kg bw/day	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,35	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	4,1	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	4,2	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	2,3	mg/kg bw/day	

## 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:

Chemical resistant protective gloves (EN ISO 374).

If applicable

Protective gloves in butyl rubber (EN ISO 374).

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Protective Neoprene® / polychloroprene gloves (EN ISO 374).

Protective nitrile 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:

If OES or MEL is exceeded.

Filter A P2 (EN 14387), code colour brown, white

Observe wearing time limitations for respiratory protection equipment.

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.

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:	Reddish
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:	There is no information available on this parameter.
Auto-ignition temperature:	There is no information available on this parameter.
Decomposition temperature:	There is no information available on this parameter.
pH:	7,5
Kinematic viscosity:	There is no information available on this parameter.
Solubility:	Mixable
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:	1,12 g/ml
Relative vapour density:	There is no information available on this parameter.
Particle characteristics:	Does not apply to liquids.

### 9.2 Other information

Corrosive to metals: There is no information available on this parameter.

## SECTION 10: Stability and reactivity



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### 10.1 Reactivity

Product corrodes metals.

### 10.2 Chemical stability

Stable with proper storage and handling.

### 10.3 Possibility of hazardous reactions

Avoid contact with certain metals e.g. aluminium (development of hydrogen gas 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 certain metals e.g. aluminium.

### 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).

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Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	321,5	mg/kg			calculated value
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.

#### Ammonium mercaptoacetate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	71	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	Anhydrous substance
Acute toxicity, by oral route:	ATE	71	mg/kg			
Acute toxicity, by dermal route:	LD50	> 2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	(71% solution)
Acute toxicity, by inhalation:	LC50	> 2,75	mg/l/1h	Rat		(71% solution)
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Slightly irritant (71% solution)
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Slightly irritant (71% solution)

Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Skin Sens. 1B (71% solution)
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Yes (skin contact)
Germ cell mutagenicity:					OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative, Analogous conclusion
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity:	NOAEL	20	mg/kg/d	Rat	OECD 416 (Two-generation Reproduction Toxicity Study)	Analogous conclusion
Reproductive toxicity:	NOAEL	20	mg/kg/d	Rat	OECD 421 (Reproduction/Developmental Toxicity Screening Test)	Analogous conclusion

**Alcohols, C12-14, ethoxylated, sulfates, sodium salts**

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	2800-4100	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)	Skin Irrit. 2
Serious eye damage/irritation:		>=10	%	Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Dam. 1
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 475 (Mammalian Bone Marrow Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Reproductive toxicity:	NOAEL	>1000	mg/kg	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative, References
Reproductive toxicity:	NOAEL	>300	mg/kg	Rat	OECD 416 (Two-generation Reproduction Toxicity Study)	Negative, References
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	>225	mg/kg	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Target organ(s): liver, References
Aspiration hazard:						No
Symptoms:						mucous membrane irritation

<b>Sodium p-cumenesulphonate</b>						
<b>Toxicity / effect</b>	<b>Endpoint</b>	<b>Value</b>	<b>Unit</b>	<b>Organism</b>	<b>Test method</b>	<b>Notes</b>
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>5	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Carcinogenicity:				Rat	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Negative
Reproductive toxicity:	NOAEL	>936	mg/kg	Rat		
Reproductive toxicity (Effects on fertility):	NOAEL	300-1000	mg/kg bw/d	Rat	OECD 421 (Reproduction/Developmental Toxicity Screening Test)	
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	763-3534	mg/kg		OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	763	mg/kg	Rat		Target organ(s): heart, References
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	LOAEL	1300	mg/kg bw/d	Mouse	OECD 411 (Subchronic Dermal Toxicity - 90-day Study)	
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	>440	mg/kg		OECD 411 (Subchronic Dermal Toxicity - 90-day Study)	
Aspiration hazard:						n.a.

<b>Benzaldehyde</b>						
<b>Toxicity / effect</b>	<b>Endpoint</b>	<b>Value</b>	<b>Unit</b>	<b>Organism</b>	<b>Test method</b>	<b>Notes</b>
Acute toxicity, by oral route:	LD50	1300	mg/kg	Rat		
Acute toxicity, by oral route:	ATE	1300	mg/kg			
Acute toxicity, by dermal route:	LD50	2500	mg/kg	Rabbit	IUCLID Chem. Data Sheet (ESIS)	
Aspiration hazard:						No

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Symptoms:						respiratory distress, drowsiness, unconsciousness, headaches, cramps, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting.
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Bronopol (INN)						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	305	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	data of a diluted aqueous solution
Acute toxicity, by oral route:	ATE	305	mg/kg			
Acute toxicity, by dermal route:	ATE	1100	mg/kg			
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	Does not conform with EU classification.
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Skin Irrit. 2
Serious eye damage/irritation:				Rabbit	(Draize-Test)	Eye Dam. 1
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitizing
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Not sensitizing
Germ cell mutagenicity:						Negative
Carcinogenicity:						Negative
Specific target organ toxicity - single exposure (STOT-SE):						STOT SE 3, H335
Symptoms:						eyes, reddened, drowsiness, coughing, mucous membrane irritation, nausea and vomiting.

## 11.2. Information on other hazards

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Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Endocrine disrupting properties:						Does not apply to mixtures.

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Other information:						No other relevant information available on adverse effects on health.
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**SECTION 12: Ecological information**

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

<b>Reactive Rust Remover</b>							
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<b>Toxicity / effect</b>	<b>Endpoint</b>	<b>Time</b>	<b>Value</b>	<b>Unit</b>	<b>Organism</b>	<b>Test method</b>	<b>Notes</b>
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
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.

Ammonium mercaptoacetate							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	> 100	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	(71% solution)
12.1. Toxicity to daphnia:	EC50	48h	38	mg/l	Daphnia magna	84/449/EEC C.2	Analogous conclusion
12.1. Toxicity to algae:	EC50	72h	13	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion
12.2. Persistence and degradability:		28d	70	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Analogous conclusion, Biodegradable
12.3. Bioaccumulative potential:	Log Pow		-2,99				
12.3. Bioaccumulative potential:	BCF		1				Analogous conclusion (71% solution)
12.4. Mobility in soil:							Not to be expected
12.5. Results of PBT and vPvB assessment							No PBT substance

Alcohols, C12-14, ethoxylated, sulfates, sodium salts							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	7,1	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	45d	1	mg/l	Pimephales promelas	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	7,2	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	0,18	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	NOEC/NOEL	96h	0,95	mg/l		OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EC50	72h	27,7	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	

12.2. Persistence and degradability:		28d	95	%		OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)	Readily biodegradable
12.2. Persistence and degradability:		28d	>70	%		OECD 301 A (Ready Biodegradability - DOC Die-Away Test)	Readily biodegradable
12.2. Persistence and degradability:	DOC	28d	100	%	activated sludge	Regulation (EC) 440/2008 C.4-C (DETERMINATION OF 'READY' BIODEGRADABILITY - CO <sub>2</sub> EVOLUTION TEST)	Readily biodegradable
12.2. Persistence and degradability:			>80%			OECD 302 B (Inherent Biodegradability - Zahn-Wellens/EMPA Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		0,3			OECD 123 (Partition Coefficient (1-Octanol / Water) - Slow-Stirring Method)	Bioaccumulation is unlikely (LogPow < 1).
12.3. Bioaccumulative potential:	BCF		-1,38				Low
12.4. Mobility in soil:	Koc		191				calculated value
12.5. Results of PBT and vPvB assessment							No PBT substance
Toxicity to bacteria:	EC50	16h	>10	g/l	<i>Pseudomonas putida</i>	DIN 38412 T.8	

**Sodium p-cumenesulphonate**

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	<i>Cyprinus caprio</i>	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	>100	mg/l	<i>Daphnia magna</i>	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	<i>Desmodesmus subspicatus</i>	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	96h	31	mg/l	<i>Pseudokirchneriella subcapitata</i>		EPA OTS 797.1050
12.2. Persistence and degradability:		28d	>60	%	activated sludge	OECD 301 B (Ready Biodegradability - Co <sub>2</sub> Evolution Test)	Readily biodegradable

12.3. Bioaccumulative potential:	Log Pow		-1,1			OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)	Bioaccumulation is unlikely (LogPow < 1). 23 °C
12.4. Mobility in soil:							Not to be expected
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC10	3h	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

#### Benzaldehyde

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	1,07	mg/l	Lepomis macrochirus	IUCLID Chem. Data Sheet (ESIS)	
12.1. Toxicity to daphnia:	EC50	24h	50	mg/l	Daphnia magna	IUCLID Chem. Data Sheet (ESIS)	
12.1. Toxicity to algae:	IC5	8h	34	mg/l	Scenedesmus quadricauda		
12.2. Persistence and degradability:		28d	>95	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		1,48				A notable biological accumulation potential is not to be expected (LogPow 1-3).20°C

#### Bronopol (INN)

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	3	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	LC50	28d	2,61	mg/l	Oncorhynchus mykiss	OECD 210 (Fish, Early-Life Stage Toxicity Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	0,06	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to daphnia:	EC50	48h	1,4	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	



12.1. Toxicity to algae:	EC50	72h	0,068	mg/l	Anabaena flos-aquae	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	0,0025	mg/l	Anabaena flos-aquae	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:			>70	%	activated sludge	OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable
12.2. Persistence and degradability:			63,5	%		OECD 314 (Simulation Tests to Assess the Biodegradability of Chemicals Discharged in Wastewater)	Biodegradable
12.3. Bioaccumulative potential:	Log Kow		0,22-0,38			OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)	
12.3. Bioaccumulative potential:	BCF		3,16				
Toxicity to bacteria:	EC50	3h	43	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other organisms:	LC50	14d	>500	mg/l	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	
Other information:	COD		600	mg/g			
Other information:	Koc		5				

## 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.

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Empty container completely.

Uncontaminated packaging can be recycled.


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

15 01 02 plastic packaging


## 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. (AMMONIUM MERCAPTOACETATE)		
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. (AMMONIUM MERCAPTOACETATE)		
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	
Segregation:	-	

#### 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. (AMMONIUM MERCAPTOACETATE)		
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.

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 national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!

Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC):

< 1,5 %

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

5 % or over but less than 15 %  
 anionic surfactants

perfumes  
 ALPHA-ISOMETHYL IONONE  
 2-BROMO-2-NITROPROPANE-1,3-DIOL

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: 3  
 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
Acute Tox. 4, H302	Classification according to calculation procedure.
Eye Irrit. 2, H319	Classification according to calculation procedure.
Skin Sens. 1, H317	Classification according to calculation procedure.
Met. Corr. 1, H290	Classification based on test data.

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

H317 May cause an allergic skin reaction.  
 H290 May be corrosive to metals.  
 H301 Toxic if swallowed.  
 H302 Harmful if swallowed.  
 H312 Harmful in contact with skin.  
 H315 Causes skin irritation.  
 H318 Causes serious eye damage.  
 H319 Causes serious eye irritation.  
 H335 May cause respiratory 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.

Acute Tox. — Acute toxicity - oral  
 Eye Irrit. — Eye irritation  
 Skin Sens. — Skin sensitization  
 Met. Corr. — Substance or mixture corrosive to metals  
 Skin Irrit. — Skin irritation  
 Eye Dam. — Serious eye damage  
 Aquatic Chronic — Hazardous to the aquatic environment - chronic  
 Acute Tox. — Acute toxicity - dermal  
 STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation  
 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.  
 Guidelines for the preparation of safety data sheets as amended (ECHA).

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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

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LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)

Log Koc Logarithm of adsorption coefficient of organic carbon in the soil

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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