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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:

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) Hazard class Hazard category Hazard statement Acute Tox. H302-Harmful if swallowed. 4 Eye Irrit. 2 H319-Causes serious eye irritation. Skin Sens. 1 H317-May cause an allergic skin reaction. 3 Aquatic Chronic H412-Harmful to aquatic life with long lasting effects. Met. Corr. 1 H290-May be corrosive to metals.

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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. H412-Harmful to aquatic life with long lasting effects. 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. P273-Avoid release to the environment. 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

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-	Met. Corr. 1, H290
factors	Acute Tox. 3, H301
	Skin Sens. 1B, H317
	Aquatic Chronic 3, H412
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	

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EINECS, ELINCS, NLP, REACH-IT List-No.	500-234-8
CAS	68891-38-3
content %	5-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-	Skin Irrit. 2, H315
factors	Eye Dam. 1, H318
	Aquatic Chronic 3, H412
Specific Concentration Limits and ATE	Eye Dam. 1, H318: >=10 %
	Eye Irrit. 2, H319: >=5 %

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

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

Drenenal (INNI)	
Bronopol (INN)	
Registration number (REACH)	
Index	603-085-00-8
EINECS, ELINCS, NLP, REACH-IT List-No.	200-143-0
CAS	52-51-7
content %	<0,1
Classification according to Regulation (EC) 1272/2008 (CLP), M-	Acute Tox. 4, H302
factors	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)
Specific Concentration Limits and ATE	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.

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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

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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.

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 /	Effect on health	Descripto	Value	Unit	Note	
	Environmental		r				
	compartment						
	Environment - marine		PNEC	0,001	mg/l		
	Environment - freshwater		PNEC	0,01	mg/l		
	Environment - water, sporadic (intermittent) release		PNEC	0,049	mg/l		

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	Environment - sediment, freshwater		PNEC	0,038	mg/kg dw
	Environment - sediment, marine		PNEC	0,004	mg/kg dw
	Environment - soil		PNEC	0,001	mg/kg dw
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,165	mg/m3
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,0286	mg/kg bw/d
Consumer	Human - oral	Long term, systemic effects	DNEL	0,095	mg/kg bw/d
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,24	mg/kg bw/d
Workers / employees	Human - dermal	Long term, local effects	DNEL	0,004	mg/cm2
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,937	mg/m3

Area of application	Exposure route / Environmental compartment	Effect on health	Descripto r	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						
E	xposure route / nvironmental ompartment	Effect on health	Descripto r	Value	Unit	Note	

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	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

Area of application	Exposure route /	Effect on health	Descripto	Value	Unit	Note
	Environmental		r			
	compartment					
	Environment - freshwater		PNEC	0,01	mg/l	
	Environment - marine		PNEC	0,001	mg/kg	
	Environment - sewage		PNEC	0,43	mg/l	
	treatment plant				-	
	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

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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). 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: Colour: Odour: Melting point/freezing point: Boiling point or initial boiling point and boiling range: Flammability: Liquid Reddish Characteristic There is no information available on this parameter. There is no information available on this parameter. There is no information available on this parameter.

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Lower explosion limit: Upper explosion limit: Flash point: Auto-ignition temperature: Decomposition temperature: pH: Kinematic viscosity: Solubility: Partition coefficient n-octanol/water (log value): Vapour pressure: Density and/or relative density: Relative vapour density: Particle characteristics: There is no information available on this parameter. 7,5 There is no information available on this parameter. Mixable Does not apply to mixtures. There is no information available on this parameter. 1,12 g/ml

There is no information available on this parameter. Does not apply to liquids.

There is no information available on this parameter.

SECTION 10: Stability and reactivity

10.1 Reactivity

Corrosive to metals:

Product corrodes metals.

9.2 Other information

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

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 Aspiration hazard:

 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	Anhydrous
					Oral Toxicity)	substance
Acute toxicity, by oral route:	ATE	71	mg/kg			
Acute toxicity, by dermal	LD50	> 2000	mg/kg	Rat	OECD 402 (Acute	(71% solution)
route:					Dermal Toxicity)	(
Acute toxicity, by inhalation:	LC50	> 2,75	mg/l/1h	Rat		(71% solution)
Skin corrosion/irritation:			Ŭ	Rabbit	OECD 404 (Acute	Slightly irritant
					Dermal	(71% solution)
					Irritation/Corrosion)	,
Serious eye				Rabbit	OECD 405 (Acute	Slightly irritant
damage/irritation:					Eye	(71% solution)
0					Irritation/Corrosion)	,
Respiratory or skin				Guinea pig	OECD 406 (Skin	Sensitising
sensitisation:					Sensitisation)	(skin contact)
Respiratory or skin				Mouse	OECD 429 (Śkin	Yes (skin
sensitisation:					Sensitisation - Local	contact) (71%
					Lymph Node Assay)	solution)
Germ cell mutagenicity:					OECD 473 (In Vitro	Negative,
6 ,					Mammalian	Analogous
					Chromosome	conclusion
					Aberration Test)	
Germ cell mutagenicity:					OECD 474	Negative,
					(Mammalian	Analogous
					Erythrocyte	conclusion
					Micronucleus Test)	
Germ cell mutagenicity:					OECD 471 (Bacterial	Negative
					Reverse Mutation	- 5
					Test)	
Germ cell mutagenicity:					OECD 476 (In Vitro	Negative
5,					Mammalian Cell Gene	0
					Mutation Test)	
Reproductive toxicity:	NOAEL	75	mg/kg	Rat	OECD 414 (Prenatal	(71% solution)
, ,					Developmental	· · · · · · · · · · · · · · · · · · ·
					Toxicity Study)	
Reproductive toxicity:	NOAEL	20	mg/kg/d	Rat	OECD 416 (Two-	Analogous
	-	_	3. 3.		generation	conclusion
					Reproduction Toxicity	
					Study)	
Reproductive toxicity:	NOAEL	20	mg/kg/d	Rat	OECD 421	Analogous
	-	_	3. 3.		(Reproduction/Develop	conclusion
					mental Toxicity	
					Screening Test)	
Symptoms:		1				breathing
->						difficulties, in
						contact:
						coughing,
						vomiting and
						nausea may
	1			1		occur.

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)				

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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

Sodium p-cumenesulphona						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute	
					Oral Toxicity)	
Acute toxicity, by dermal	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute	
route:					Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>5	mg/l/4h	Rat	OECD 403 (Acute	Aerosol
					Inhalation Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute	Not irritant
					Dermal	
					Irritation/Corrosion)	
Serious eye				Rabbit	OECD 405 (Acute	Eye Irrit. 2
damage/irritation:					Eye	
					Irritation/Corrosion)	
Respiratory or skin				Guinea pig	OECD 406 (Skin	No (skin
sensitisation:					Sensitisation)	contact)
Germ cell mutagenicity:				Mouse	OECD 474	Negative
					(Mammalian	-
					Erythrocyte	
					Micronucleus Test)	
Germ cell mutagenicity:				Salmonella	OECD 471 (Bacterial	Negative
				typhimurium	Reverse Mutation	-
					Test)	
Carcinogenicity:				Rat	OECD 453	Negative
					(Combined Chronic	-
					Toxicity/Carcinogenicit	
					y Studies)	

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Reproductive toxicity:	NOAEL	>936	mg/kg	Rat		
Reproductive toxicity (Effects on fertility):	NOAEL	300-1000	mg/kg bw/d	Rat	OECD 421 (Reproduction/Develop mental 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.

Benzaldehyde						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1300	mg/kg	Rat		
Acute toxicity, by oral route:	ATE	1300	mg/kg			
Acute toxicity, by dermal	LD50	2500	mg/kg	Rabbit	IUCLID Chem. Data	
route:					Sheet (ESIS)	
Aspiration hazard:						No
Symptoms:						respiratory distress, drowsiness, unconsciousnes s, headaches, cramps, drowsiness, mucous membrane irritation, dizziness,
						nausea and vomiting.

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	305	mg/kg	Rat	OECD 401 (Acute	data of a
					Oral Toxicity)	diluted
						aequous
						solution
Acute toxicity, by oral route:	ATE	305	mg/kg			
Acute toxicity, by dermal	ATE	1100	mg/kg			
route:						
Acute toxicity, by dermal	LD50	>2000	mg/kg	Rat	OECD 402 (Acute	Does not
route:					Dermal Toxicity)	conform with
						EU
						classification.
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute	Skin Irrit. 2
					Dermal	
					Irritation/Corrosion)	
Serious eye				Rabbit	(Draize-Test)	Eye Dam. 1
damage/irritation:						

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Respiratory or skin	Guinea pig	OECD 406 (Skin	Not sensitizising
sensitisation:		Sensitisation)	
Respiratory or skin	Mouse	OECD 429 (Skin	Not sensitizising
sensitisation:		Sensitisation - Local	
		Lymph Node Assay)	
Germ cell mutagenicity:			Negative
Carcinogenicity:			Negative
Specific target organ toxicity -			STOT SE 3,
single exposure (STOT-SE):			H335
Symptoms:			eyes,
			reddened,
			drowsiness,
			coughing,
			mucous
			membrane
			irritation,
			nausea and
			vomiting.

11.2. Information on other hazards

Reactive Rust Remover Art.: 359999						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Endocrine disrupting properties: Other information:						Does not apply to mixtures. No other relevant information available on adverse effects on health.

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification). **Reactive Rust Remover** Art.: 359999 Endpoint Time Value Unit Test method Toxicity / effect Organism Notes 12.1. Toxicity to fish: 12.1. Toxicity to n.d.a. n.d.a. daphnia: 12.1. Toxicity to algae: n.d.a.

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12.2. Persistence and						The
degradability:						surfactant(s) contained in this mixture complies(compl y) 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						n.d.a.
potential: 12.4. Mobility in soil:						n.d.a.
12.5. Results of PBT and vPvB assessment						n.d.a.
12.6. Endocrine						Does not apply
disrupting properties: 12.7. Other adverse effects:						to mixtures. No information available on other adverse effects on the environment.
Other information:						DOC- elimination degree(complex ing organic substance)>= 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		

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12.1. Toxicity to daphnia:	NOEC/NOEL	21d	3,8	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	Analogous conclusion
12.1. Toxicity to algae:	NOEC/NOEL	72h	0,52	mg/l			Analogous conclusion
12.1. Toxicity to algae:	EC50	72h	13	mg/l	Pseudokirchnerie Ila subcapitata	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion
12.2. Persistence and degradability:		28d	100	%		OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	Analogous conclusion
12.2. Persistence and degradability:		28d	70	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Analogous conclusion
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

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	OECD 203	
					promelas	(Fish, Acute	
						Toxicity Test)	
12.1. Toxicity to	EC50	48h	7,2	mg/l	Daphnia magna	OECD 202	
daphnia:						(Daphnia sp.	
						Acute	
						Immobilisation	
						Test)	
12.1. Toxicity to	NOEC/NOEL	21d	0,18	mg/l	Daphnia magna	OECD 211	
daphnia:						(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	OECD 201	
					subspicatus	(Alga, Growth	
						Inhibition Test)	
12.2. Persistence and		28d	95	%		OECD 301 E	Readily
degradability:						(Ready	biodegradable
						Biodegradability -	
						Modified OECD	
						Screening Test)	

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12.2. Persistence and		28d	>70	%		OECD 301 A	Readily
degradability:						(Ready	biodegradable
						Biodegradability -	
						DOC Die-Away	
						Test)	
12.2. Persistence and	DOC	28d	100	%	activated sludge	Regulation (EC)	Readily
degradability:						440/2008 C.4-C	biodegradable
						(DETERMINATI	
						ON OF 'READY'	
						BIODEGRADABI	
						LITY - CO2	
						EVOLUTION	
						TEST)	
12.2. Persistence and			>80%			OECD 302 B	Readily
degradability:						(Inherent	biodegradable
						Biodegradability -	
						Zahn-	
						Wellens/EMPA	
						Test)	
12.3. Bioaccumulative	Log Pow		0,3			OECD 123	Bioaccumulatio
potential:						(Partition	n is unlikely
						Coefficient (1-	(LogPow < 1).
						Octanol / Water)	
						- Slow-Stirring	
						Method)	
12.3. Bioaccumulative	BCF		-1,38				Low
potential:							
12.4. Mobility in soil:	Koc		191				calculated value
12.5. Results of PBT							No PBT
and vPvB assessment							substance
Toxicity to bacteria:	EC50	16h	>10	g/l	Pseudomonas putida	DIN 38412 T.8	

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Cyprinus caprio	OECD 203	
						(Fish, Acute	
						Toxicity Test)	
12.1. Toxicity to	EC50	48h	>100	mg/l	Daphnia magna	OECD 202	
daphnia:						(Daphnia sp.	
						Acute	
						Immobilisation	
						Test)	
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	Desmodesmus	OECD 201	
					subspicatus	(Alga, Growth	
						Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	96h	31	mg/l	Pseudokirchnerie		EPA OTS
					lla subcapitata		797.1050
12.2. Persistence and		28d	>60	%	activated sludge	OECD 301 B	Readily
degradability:						(Ready	biodegradable
						Biodegradability -	
						Co2 Evolution	
						Test)	
12.3. Bioaccumulative	Log Pow		-1,1			OECD 107	Bioaccumulatio
potential:						(Partition	n is unlikely
						Coefficient (n-	(LogPow < 1).
						octanol/water) -	23 °C
						Shake Flask	
						Method)	
12.4. Mobility in soil:							Not to be
							expected

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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

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	3	mg/l	Oncorhynchus	OECD 203	
-				_	mykiss	(Fish, Acute	
						Toxicity Test)	
12.1. Toxicity to fish:	LC50	28d	2,61	mg/l	Oncorhynchus	OECD 210	
				_	mykiss	(Fish, Early-Life	
						Stage Toxicity	
						Test)	
12.1. Toxicity to	NOEC/NOEL	21d	0,06	mg/l	Daphnia magna	OECD 211	
daphnia:						(Daphnia magna	
						Reproduction	
						Test)	
12.1. Toxicity to	EC50	48h	1,4	mg/l	Daphnia magna	OECD 202	
daphnia:						(Daphnia sp.	
						Acute	
						Immobilisation	
						Test)	
12.1. Toxicity to algae:	EC50	72h	0,068	mg/l	Anabaena flos-	OECD 201	
					aquae	(Alga, Growth	
						Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	0,0025	mg/l	Anabaena flos-	OECD 201	
					aquae	(Alga, Growth	
						Inhibition Test)	

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12.2. Persistence and			>70	%	activated sludge	OECD 301 B	Readily
degradability:						(Ready	biodegradable
						Biodegradability -	
						Co2 Evolution	
						Test)	
12.2. Persistence and			63,5	%		OECD 314	Biodegradable
degradability:						(Simulation	
						Tests to Assess	
						the	
						Biodegradability	
						of Chemicals	
						Discharged in	
						Wastewater)	
12.3. Bioaccumulative	Log Kow		0,22-			OECD 107	
potential:			0,38			(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.

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

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SECTION 15: Regulatory information

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

Observe restrictions:

anionic surfactants

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): **REGULATION (EC) No 648/2004** 5 % or over but less than 15 %

< 1,5 %

perfumes ALPHA-ISOMETHYL IONONE

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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:

2.3.8.11.12.16

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.
Aquatic Chronic 3, H412	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 Aquatic Chronic - Hazardous to the aquatic environment - chronic Met. Corr. — Substance or mixture corrosive to metals Skin Irrit. — Skin irritation Eye Dam. — Serious eye damage 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). 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).

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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:

according, according to acc., acc. 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 approximately approx. Article number Art., Art. no. 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 for example (abbreviation of Latin 'exempli gratia'), for instance e.a. EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants) European Community EC 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 **European Norms** EN EPA United States Environmental Protection Agency (United States of America) ErCx, $E\mu Cx$, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants) etc. et cetera **European Union** EU EVAL Ethylene-vinyl alcohol copolymer Fax. Fax number general gen. GHS Globally Harmonized System of Classification and Labelling of Chemicals GWP Global warming potential Adsorption coefficient of organic carbon in the soil Koc octanol-water partition coefficient Kow IARC International Agency for Research on Cancer IATA International Air Transport Association International Bulk Chemical (Code) IBC (Code) International Maritime Code for Dangerous Goods IMDG-code incl. including, inclusive IUCLIDInternational 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 Log Kow, Log Pow Logarithm of octanol-water partition coefficient Limited Quantities 10

GBRIM Page 22 of 22 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II (last amended by Regulation (EU) 2020/878) Revision date / version: 21.01.2025 / 0004 Replacing version dated / version: 26.11.2024 / 0003 Valid from: 21.01.2025 PDF print date: 21.01.2025 **Reactive Rust Remover** Art.: 359999 MARPOL International Convention for the Prevention of Marine Pollution from Ships mg/kg bw ma/ka 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 NIOSHNational Institute for Occupational Safety and Health (USA) No-longer-Polymer NLP NOEC, NOEL No Observed Effect Concentration/Level OECD Organisation for Economic Co-operation and Development ora. organic OSHA Occupational Safety and Health Administration (USA) persistent, bioaccumulative and toxic PBT PE Polvethvlene 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 Telephone Tel. 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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