



Safety Data Sheet according to (EC) No 1907/2006 as amended

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BONDERITE C-AK 4215 NC-LT ALKALINE CLEANER S23RWE
AERO

SDS No. : 194758
V011.2

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

1.1. Product identifier

BONDERITE C-AK 4215 NC-LT ALKALINE CLEANER S23RWE AERO
UFI: QVMW-YW0N-D20X-D270

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

Intended use:
Alkaline Cleaner for Industrial Application

1.3. Details of the supplier of the safety data sheet

Henkel AG & Co. KGaA
Henkelstr. 67
40589 Düsseldorf

Germany

Phone: +49 211 797 0

For Safety Data Sheet updates please visit our website www.mysds.henkel.com or www.henkel-adhesives.com.
SDSinfo.Adhesive@henkel.com

1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Serious eye damage	Category 1
H318 Causes serious eye damage.	
Toxic to reproduction	Category 1B
H360FD May damage fertility. May damage the unborn child.	
Chronic hazards to the aquatic environment	Category 3
H412 Harmful to aquatic life with long lasting effects.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains

Alcohols, C12-15-branched and linear, >2.5EO

Sodium tetraborate pentahydrate

Signal word:	Danger
Hazard statement:	H360FD May damage fertility. May damage the unborn child. H318 Causes serious eye damage. H412 Harmful to aquatic life with long lasting effects.
Supplemental information	Contains: benzothiazole-2-thiol May produce an allergic reaction. Restricted to professional users.
Precautionary statement: Prevention	P201 Obtain special instructions before use. P260 Do not breathe dust. P280 Wear eye protection/face protection.
Precautionary statement: Response	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 or doctor. P308+P313 IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

None if used properly.

Following substances are present in a concentration \geq the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in a concentration \geq the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M-factors and ATEs	Add. Information
Sodium tetraborate pentahydrate 12179-04-3 215-540-4, 215-540-4 01-2119490790-32	40- 60 %	Repr. 1B, H360FD Eye Irrit. 2, H319		SVHC
Sodium nitrate 7631-99-4 231-554-3 01-2119488221-41	5- < 10 %	Ox. Sol. 3, H272 Eye Irrit. 2, H319		EUEXPL2D
Alcohols, C12-15-branched and linear, >2.5EO 106232-83-1	5- < 10 %	Aquatic Chronic 3, H412 Acute Tox. 4, Oral, H302 Eye Dam. 1, H318		
Fatty alcohol, C12-14, EO/PO 68439-51-0	1- < 5 %	Aquatic Chronic 3, H412		
alkali fluorosilicates (Na) 16893-85-9 240-934-8	1- < 5 %	Acute Tox. 3, Oral, H301 Acute Tox. 3, Dermal, H311 Acute Tox. 3, Inhalation, H331		EU OEL
2-(2-butoxyethoxy)ethanol 112-34-5 203-961-6 01-2119475104-44	1- < 5 %	Eye Irrit. 2, H319		EU OEL
benzothiazole-2-thiol 149-30-4 205-736-8 01-2119485805-26	0,1- < 1 %	Skin Sens. 1, H317 Aquatic Chronic 1, H410 Aquatic Acute 1, H400	M acute = 1 M chronic = 1	

**If no ATE values are displayed, please refer to LD/LC50 values in Section 11.
For full text of the H - statements and other abbreviations see section 16 "Other information".
Declaration of ingredients according to Detergent Regulation 648/2004/EC**

15 - 30 % phosphates
5 - 15 % non-ionic surfactants

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person from dust-contaminated zone, seek medical advice if necessary.

Skin contact:
Immediately wash skin thoroughly with soap and water.

Eye contact:
Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:
Drink 1-2 glasses of water, do not induce vomiting, administer an antifoaming agent (sab simplex), seek medical attention.

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

After eye contact: Corrosive, may cause permanent damage to eyes (impairment of vision).

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray jet
Carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in fires.

5.3. Advice for firefighters

Wear protective equipment.
Wear self-contained breathing apparatus.

Additional information:

The product itself does not burn. Any fire extinguishing action should be appropriate to the surroundings.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation.
Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Remove mechanically.
Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin and eye contact.
Ensure that workrooms are adequately ventilated.
See advice in section 8
Avoid dust formation.

Hygiene measures:

Wash hands before work breaks and after finishing work.
Do not eat, drink or smoke while working.
The workplace should be equipped with an emergency shower and eye-rinsing facility.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container.
Keep container in a well ventilated place.
Keep container tightly sealed.
Store in a cool, dry place.
Do not keep together with acids in one container.

7.3. Specific end use(s)

Alkaline Cleaner for Industrial Application

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Germany

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Boric acid, sodium salt 12179-04-3		0,5	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Boric acid, sodium salt 12179-04-3			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
Disodium hexafluorosilicate 16893-85-9 [FLUORIDES, INORGANIC]		2,5	Time Weighted Average (TWA):	Indicative	ECTLV
Disodium hexafluorosilicate 16893-85-9		1	Exposure limit(s):	4 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Disodium hexafluorosilicate 16893-85-9			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Disodium hexafluorosilicate 16893-85-9		1	Exposure limit(s):	4 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Disodium hexafluorosilicate 16893-85-9			Skin designation:	Can be absorbed through the skin.	TRGS 900
Disodium hexafluorosilicate 16893-85-9			Skin designation:	Can be absorbed through the skin.	TRGS 900
Disodium hexafluorosilicate 16893-85-9			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Disodium hexafluorosilicate 16893-85-9			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Disodium hexafluorosilicate 16893-85-9			Skin designation:	Can be absorbed through the skin.	TRGS 900
Disodium hexafluorosilicate 16893-85-9		1	Exposure limit(s):	4 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
2-(2-Butoxyethoxy)ethanol 112-34-5 [2-(2-BUTOXYETHOXY)ETHANOL]	10	67,5	Time Weighted Average (TWA):	Indicative	ECTLV
2-(2-Butoxyethoxy)ethanol 112-34-5 [2-(2-BUTOXYETHOXY)ETHANOL]	15	101,2	Short Term Exposure Limit (STEL):	Indicative	ECTLV
2-(2-Butoxyethoxy)ethanol 112-34-5	10	67	Exposure limit(s):	1.5 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
2-(2-Butoxyethoxy)ethanol 112-34-5			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing	TRGS 900

				effect in respiratory passages.	
Benzothiazole-2-thiol 149-30-4		4	Exposure limit(s):	If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Sodium tetraborate pentahydrate 12179-04-3	aqua (freshwater)		2,9 mg/l				
Sodium tetraborate pentahydrate 12179-04-3	aqua (marine water)		2,9 mg/l				
Sodium tetraborate pentahydrate 12179-04-3	Soil				5,7 mg/kg		
Sodium tetraborate pentahydrate 12179-04-3	sewage treatment plant (STP)		10 mg/l				
Sodium nitrate 7631-99-4	sewage treatment plant (STP)		18 mg/l				
2-(2-butoxyethoxy)ethanol 112-34-5	aqua (freshwater)		1,1 mg/l				
2-(2-butoxyethoxy)ethanol 112-34-5	aqua (marine water)		0,11 mg/l				
2-(2-butoxyethoxy)ethanol 112-34-5	Freshwater - intermittent		11 mg/l				
2-(2-butoxyethoxy)ethanol 112-34-5	sediment (freshwater)				4,4 mg/kg		
2-(2-butoxyethoxy)ethanol 112-34-5	sediment (marine water)				0,44 mg/kg		
2-(2-butoxyethoxy)ethanol 112-34-5	oral				56 mg/kg		
2-(2-butoxyethoxy)ethanol 112-34-5	Soil				0,32 mg/kg		
Benzothiazole-2-thiol 149-30-4	aqua (freshwater)		0,004 mg/l				
Benzothiazole-2-thiol 149-30-4	Freshwater - intermittent		0,005 mg/l				
Benzothiazole-2-thiol 149-30-4	aqua (marine water)		0 mg/l				
Benzothiazole-2-thiol 149-30-4	sewage treatment plant (STP)		0,3 mg/l				
Benzothiazole-2-thiol 149-30-4	sediment (freshwater)				0,147 mg/kg		
Benzothiazole-2-thiol 149-30-4	sediment (marine water)				0,015 mg/kg		
Benzothiazole-2-thiol 149-30-4	Soil				0,027 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Sodium tetraborate pentahydrate 12179-04-3	Workers	Inhalation	Long term exposure - systemic effects		6,7 mg/m ³	
Sodium tetraborate pentahydrate 12179-04-3	Workers	dermal	Long term exposure - systemic effects		316,4 mg/kg	
Sodium tetraborate pentahydrate 12179-04-3	General population	dermal	Long term exposure - systemic effects		159,5 mg/kg	
Sodium tetraborate pentahydrate 12179-04-3	General population	Inhalation	Long term exposure - systemic effects		3,4 mg/m ³	
Sodium tetraborate pentahydrate 12179-04-3	General population	oral	Long term exposure - systemic effects		0,79 mg/kg	
Sodium tetraborate pentahydrate 12179-04-3	General population	oral	Acute/short term exposure - systemic effects		0,79 mg/kg	
2-(2-butoxyethoxy)ethanol 112-34-5	Workers	inhalation	Acute/short term exposure - local effects		101,2 mg/m ³	
2-(2-butoxyethoxy)ethanol 112-34-5	Workers	inhalation	Long term exposure - local effects		67,5 mg/m ³	
2-(2-butoxyethoxy)ethanol 112-34-5	Workers	dermal	Long term exposure - local effects			
2-(2-butoxyethoxy)ethanol 112-34-5	General population	inhalation	Long term exposure - local effects			
2-(2-butoxyethoxy)ethanol 112-34-5	General population	inhalation	Acute/short term exposure - local effects			
2-(2-butoxyethoxy)ethanol 112-34-5	General population	oral	Long term exposure - systemic effects		6,25 mg/kg	
Benzothiazole-2-thiol 149-30-4	Workers	inhalation	Acute/short term exposure - systemic effects		70,4 mg/m ³	
Benzothiazole-2-thiol 149-30-4	Workers	inhalation	Long term exposure - systemic effects		8,8 mg/m ³	
Benzothiazole-2-thiol 149-30-4	Workers	dermal	Long term exposure - systemic effects		5 mg/kg	
Benzothiazole-2-thiol 149-30-4	Workers	dermal	Acute/short term exposure - systemic effects		40 mg/kg	
Benzothiazole-2-thiol 149-30-4	General population	oral	Acute/short term exposure - systemic effects		10 mg/kg	
Benzothiazole-2-thiol 149-30-4	General population	oral	Long term exposure - systemic effects		1,25 mg/kg	
Benzothiazole-2-thiol 149-30-4	General population	inhalation	Acute/short term exposure - systemic effects		17,6 mg/m ³	
Benzothiazole-2-thiol 149-30-4	General population	inhalation	Long term exposure - systemic effects		2,2 mg/m ³	
Benzothiazole-2-thiol 149-30-4	General population	dermal	Acute/short term exposure - systemic effects		20 mg/kg	
Benzothiazole-2-thiol 149-30-4	General population	dermal	Long term exposure - systemic effects		2,5 mg/kg	

Biological Exposure Indices:

Ingredient [Regulated substance]	Parameters	Biological specimen	Sampling time	Conc.	Basis of biol. exposure index	Remark	Additional Information
Disodium hexafluorosilicate 16893-85-9 [Inorganic fluorine compounds (fluorides)]	Fluoride	Urine	Sampling time: End of shift.	4,0 mg/l	DE BGW		

8.2. Exposure controls:

Engineering controls:
Thorough dedusting.

Respiratory protection:
In case of dust formation, we recommend wearing of appropriate respiratory protection equipment with particle filter P (EN 14387).
This recommendation should be matched to local conditions.

Hand protection:
Chemical-resistant protective gloves (EN 374). Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374): Polychloroprene (CR; >= 1 mm thickness) or natural rubber (NR; >=1 mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Polychloroprene (CR; >= 1 mm thickness) or natural rubber (NR; >=1 mm thickness) This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:
Goggles which can be tightly sealed.
Protective eye equipment should conform to EN166.

Skin protection:
Suitable protective clothing
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Delivery form	powder, solid
Colour	white
Odor	Odorless
Physical state	solid
Melting point	> 150 °C (> 302 °F)
Solidification temperature	Not applicable, Product is a solid.
Initial boiling point	> 500 °C (> 932 °F)
Flammability	The product is not flammable.
Explosive limits	Not applicable, Product is a solid.
Flash point	Not applicable, Product is a solid.
Auto-ignition temperature	Not applicable, Product is a solid.
Decomposition temperature	Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use
pH	8,9 - 9,3 Supplier method
(20 °C (68 °F); Conc.: 31 g/l; Solvent: Water)	
Viscosity (kinematic)	Not applicable, Product is a solid.

Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Soluble
Partition coefficient: n-octanol/water	Not applicable
Vapour pressure (20 °C (68 °F))	Mixture < 0,1 hPa
Density (20 °C (68 °F))	1,8 - 2,0 g/cm ³
Bulk density	800 - 900 g/l
Relative vapour density:	Not applicable, Product is a solid.
Particle characteristics	Particle Size - D10 450 µm Volume based calculation method
Particle characteristics	Particle Size - D50 770 µm Volume based calculation method
Particle characteristics	Particle Size - D90 1.240 µm Volume based calculation method

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity

Reaction with strong acids.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

No decomposition if used according to specifications.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

None if used for intended purpose.

In case of fire toxic gases can be released.

SECTION 11: Toxicological information

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

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Sodium tetraborate pentahydrate 12179-04-3	LD50	3.305 mg/kg	rat	EPA Guideline
Sodium nitrate 7631-99-4	LD50	3.430 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Alcohols, C12-15-branched and linear, >2.5EO 106232-83-1	LD50	> 300 - 2.000 mg/kg	rat	not specified
Fatty alcohol, C12-14, EO/PO 68439-51-0	LD50	3.515 mg/kg	rat	EU Method B.1 (Acute Toxicity (Oral))
2-(2-butoxyethoxy)ethanol 112-34-5	LD50	> 2.000 mg/kg	rat	EU Method B.1 (Acute Toxicity (Oral))
benzothiazole-2-thiol 149-30-4	LD50	2.830 mg/kg	rat	not specified

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Sodium tetraborate pentahydrate 12179-04-3	LD50	> 2.000 mg/kg	rabbit	FIFRA/TSCA Guideline
Sodium nitrate 7631-99-4	LD50	> 5.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Alcohols, C12-15-branched and linear, >2.5EO 106232-83-1	LD50	> 2.000 mg/kg	rabbit	not specified
Fatty alcohol, C12-14, EO/PO 68439-51-0	LD50	> 5.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
2-(2-butoxyethoxy)ethanol 112-34-5	LD50	2.764 mg/kg	rabbit	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
benzothiazole-2-thiol 149-30-4	LD50	> 7.940 mg/kg	rabbit	not specified

Acute inhalative toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
benzothiazole-2-thiol 149-30-4	LC50	> 1.270 mg/l	dust/mist	4 h	rat	not specified

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Sodium tetraborate pentahydrate 12179-04-3	not irritating	4 h	rabbit	EPA Guideline
Sodium nitrate 7631-99-4	not irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Alcohols, C12-15- branched and linear, >2.5EO 106232-83-1	not irritating		rabbit	not specified
Fatty alcohol, C12-14, EO/PO 68439-51-0	mildly irritating	4 h	rabbit	EU Method B.4 (Acute Toxicity: Dermal Irritation / Corrosion)
2-(2- butoxyethoxy)ethanol 112-34-5	not irritating		rabbit	Draize Test

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Sodium tetraborate pentahydrate 12179-04-3	irritating		rabbit	EPA OPPTS 870.2400 (Acute Eye Irritation)
Sodium nitrate 7631-99-4	Category 2B (mildly irritating to eyes)		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Alcohols, C12-15- branched and linear, >2.5EO 106232-83-1	corrosive		rabbit	not specified
Fatty alcohol, C12-14, EO/PO 68439-51-0	slightly irritating	24 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
2-(2- butoxyethoxy)ethanol 112-34-5	irritating		rabbit	Weight of evidence

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
Sodium tetraborate pentahydrate 12179-04-3	not sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Sodium nitrate 7631-99-4	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Alcohols, C12-15-branched and linear, >2.5EO 106232-83-1	not sensitising	Guinea pig maximisation test	guinea pig	not specified
2-(2-butoxyethoxy)ethanol 112-34-5	not sensitising	Guinea pig maximisation test	guinea pig	Magnusson and Kligman Method
benzothiazole-2-thiol 149-30-4	sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
benzothiazole-2-thiol 149-30-4	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Sodium tetraborate pentahydrate 12179-04-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Sodium tetraborate pentahydrate 12179-04-3	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Sodium tetraborate pentahydrate 12179-04-3	negative	sister chromatid exchange assay in mammalian cells	with and without		not specified
Sodium nitrate 7631-99-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Sodium nitrate 7631-99-4	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
alkali fluorosilicates (Na) 16893-85-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified
2-(2-butoxyethoxy)ethanol 112-34-5	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
Sodium tetraborate pentahydrate 12179-04-3	not carcinogenic	oral: feed	103 w daily	mouse	male/female	OECD Guideline 451 (Carcinogenicity Studies)

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
Sodium tetraborate pentahydrate 12179-04-3	NOAEL P 100 mg/kg NOAEL F1 100 mg/kg NOAEL F2 100 mg/kg	three- generation study	oral: feed	rat	not specified
Sodium nitrate 7631-99-4	NOAEL P >= 1.500 mg/kg	screening	oral: gavage	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

STOT-single exposure:

No data available.

STOT-repeated exposure:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
Sodium tetraborate pentahydrate 12179-04-3	NOAEL 100 mg/kg	oral: feed	2 y daily	rat	not specified
Sodium nitrate 7631-99-4	NOAEL >= 1.500 mg/kg	oral: gavage	28 d daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Alcohols, C12-15- branched and linear, >2.5EO 106232-83-1	NOAEL 50 mg/kg	oral: unspecified	2 years	rat	not specified
2-(2- butoxyethoxy)ethanol 112-34-5	NOAEL < 50 mg/kg	oral: gavage	90 days 5 days/week	rat	not specified
2-(2- butoxyethoxy)ethanol 112-34-5	NOAEL 2 - 6 ppm	inhalation	90 days	rat	not specified
2-(2- butoxyethoxy)ethanol 112-34-5	NOAEL > 2.000 mg/kg	dermal	13 weeks 6 hours/day, 5 days/week	rat	not specified
benzothiazole-2-thiol 149-30-4	NOAEL 375 mg/kg	oral: gavage	13 weeks 5 days/week	rat	not specified

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

Do not empty into drains / surface water / ground water.

Inorganic product: Decomposition not affected.

The biodegradability of the surfactants contained in the product is in accordance with the requirements of the EU Detergent Regulation (EC/648/2004).

The surfactants contained in the products are primary biodegradable to at least 90% on average.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Sodium tetraborate pentahydrate 12179-04-3	LC50	370,6 mg/l	96 h	Pimephales promelas	EPA OPPTS 850.1075 (Freshwater and Saltwater Fish Acute Toxicity Test)
Sodium tetraborate pentahydrate 12179-04-3	NOEC	6,4 mg/l	34 d	Danio rerio	OECD Guideline 210 (fish early lite stage toxicity test)
Sodium nitrate 7631-99-4	LC50	4.650 mg/l	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Alcohols, C12-15-branched and linear, >2.5EO 106232-83-1	LC50	> 1 - 10 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Fatty alcohol, C12-14, EO/PO 68439-51-0	LC50	1,6 mg/l	48 h	Leuciscus idus	DIN 38412-15
alkali fluorosilicates (Na) 16893-85-9	LC50	6,7 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-(2-butoxyethoxy)ethanol 112-34-5	LC50	1.300 mg/l	96 h	Lepomis macrochirus	OECD Guideline 203 (Fish, Acute Toxicity Test)
benzothiazole-2-thiol 149-30-4	LC50	0,73 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
benzothiazole-2-thiol 149-30-4	NOEC	0,041 mg/l	89 d	Oncorhynchus mykiss	other guideline:

Toxicity (aquatic invertebrates):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Sodium tetraborate pentahydrate 12179-04-3	EC50	242 mg/l	24 h	Daphnia magna	not specified
Sodium nitrate 7631-99-4	EC50	> 665 mg/l	96 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Alcohols, C12-15-branched and linear, >2.5EO 106232-83-1	EC50	> 1 - 10 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Fatty alcohol, C12-14, EO/PO 68439-51-0	EC50	5,4 mg/l	24 h	Daphnia magna	not specified
2-(2-butoxyethoxy)ethanol 112-34-5	EC50	3.300 mg/l	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
benzothiazole-2-thiol 149-30-4	EC50	0,71 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity (aquatic invertebrates):

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Sodium tetraborate pentahydrate 12179-04-3	NOEC	270 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Alcohols, C12-15-branched and linear, >2.5EO 106232-83-1	EC10	> 0,1 - 1 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Fatty alcohol, C12-14, EO/PO 68439-51-0	NOEC	> 0,1 - 1 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
benzothiazole-2-thiol 149-30-4	NOEC	0,08 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Sodium tetraborate pentahydrate 12179-04-3	EC50	243,66 mg/l	72 h	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Sodium tetraborate pentahydrate 12179-04-3	EC10	35 mg/l	72 h	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Alcohols, C12-15-branched and linear, >2.5EO 106232-83-1	EC50	> 1 - 10 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Fatty alcohol, C12-14, EO/PO 68439-51-0	EC10	0,54 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	DIN 38412-09
Fatty alcohol, C12-14, EO/PO 68439-51-0	EC50	1,3 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	DIN 38412-09
alkali fluorosilicates (Na) 16893-85-9	EC0	10 mg/l	96 h	Scenedesmus quadricauda	OECD Guideline 201 (Alga, Growth Inhibition Test)
alkali fluorosilicates (Na) 16893-85-9	EC50	> 10 mg/l	96 h	Scenedesmus quadricauda	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-(2-butoxyethoxy)ethanol 112-34-5	NOEC	> 100 mg/l	96 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-(2-butoxyethoxy)ethanol 112-34-5	EC50	> 100 mg/l	96 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
benzothiazole-2-thiol 149-30-4	EC50	0,5 mg/l	72 h	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
benzothiazole-2-thiol 149-30-4	NOEC	0,066 mg/l	72 h	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity (microorganisms):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Sodium tetraborate pentahydrate 12179-04-3	EC0	2.970 mg/l	30 min		not specified
Sodium nitrate 7631-99-4	EC10	180 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Alcohols, C12-15-branched and linear, >2.5EO 106232-83-1	EC50	140 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Fatty alcohol, C12-14, EO/PO 68439-51-0	EC50	> 100 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
2-(2-butoxyethoxy)ethanol 112-34-5	EC10	> 1.995 mg/l	30 min	activated sludge, industrial	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
benzothiazole-2-thiol 149-30-4	EC50	3.301 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

12.2. Persistence and degradability

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Alcohols, C12-15-branched and linear, >2.5EO 106232-83-1	readily biodegradable	aerobic	> 60 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Fatty alcohol, C12-14, EO/PO 68439-51-0	readily biodegradable	aerobic	78 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
2-(2-butoxyethoxy)ethanol 112-34-5	inherently biodegradable	aerobic	100 %	9 d	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
2-(2-butoxyethoxy)ethanol 112-34-5	readily biodegradable	aerobic	> 60 %	28 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
benzothiazole-2-thiol 149-30-4	not readily biodegradable.	aerobic	2,5 %	14 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))

12.3. Bioaccumulative potential

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
benzothiazole-2-thiol 149-30-4	< 8	6 Weeks		Cyprinus carpio	other guideline:

12.4. Mobility in soil

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	LogPow	Temperature	Method
2-(2-butoxyethoxy)ethanol 112-34-5	1	20 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
benzothiazole-2-thiol 149-30-4	2,34 - 2,5		not specified

12.5. Results of PBT and vPvB assessment

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	PBT / vPvB
Sodium tetraborate pentahydrate 12179-04-3	According to Annex XIII to Regulation (EC) No 1907/2006, a PBT and vPvB assessment shall not be conducted for inorganic substances.
Sodium nitrate 7631-99-4	According to Annex XIII to Regulation (EC) No 1907/2006, a PBT and vPvB assessment shall not be conducted for inorganic substances.
Fatty alcohol, C12-14, EO/PO 68439-51-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
2-(2-butoxyethoxy)ethanol 112-34-5	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
benzothiazole-2-thiol 149-30-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

If acidic or alkaline products are discharged into wastewater installations care must be taken that the discharged wastewater has a pH in the range pH 6 - 10, as pH variations could cause disorders in wastewater channels and biological sewage treatment plants. The local discharge regulations take precedence.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

In consultation with the responsible local authority, must be subjected to special treatment.

Waste code

060399

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information

14.1. UN number or ID number

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.2. UN proper shipping name

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.3. Transport hazard class(es)

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.4. Packing group

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.5. Environmental hazards

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.6. Special precautions for user

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009):	Not applicable
Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):	Not applicable
Persistent organic pollutants (Regulation (EU) 2019/1021):	Not applicable
VOC content (2010/75/EU)	0,3 %

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. Please see https://ec.europa.eu/home-affairs/what-we-do/policies/counter-terrorism/protection/implementation-explosives-precursors-legislation_en.

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Germany):

WGK:	WGK 2: significantly water endangering (Ordinance on facilities for handling substances that are hazardous to water (AwSV)) Classification according to AwSV, Annex 1 (5.2)
Storage class according to TRGS 510:	6.1D
General remarks (DE):	This product is in scope of the German regulation "Chemikalienverbotsverordnung"

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

- H272 May intensify fire; oxidizer.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H360FD May damage fertility. May damage the unborn child.
- 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.

ED:	Substance identified as having endocrine disrupting properties
EU OEL:	Substance with a Union workplace exposure limit
EU EXPLD 1:	Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD 2	Substance listed in Annex II, Reg (EC) No. 2019/1148
SVHC:	Substance of very high concern (REACH Candidate List)
PBT:	Substance fulfilling persistent, bioaccumulative and toxic criteria
PBT/vPvB:	Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria
vPvB:	Substance fulfilling very persistent and very bioaccumulative criteria

Further information:

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