



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

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BONDERITE C-AK 4215 NC-LT AERO known as TURCO 4215
NC-LT

SDS No. : 194758
V010.0

Revision: 18.06.2018

printing date: 18.11.2020

Replaces version from: 28.02.2017

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

1.1. Product identifier

BONDERITE C-AK 4215 NC-LT AERO known as TURCO 4215 NC-LT

Contains:

Alcohols, C12-15-branched and linear, 5-15EO
Sodium tetraborate pentahydrate

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 Ltd
Wood Lane End
HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000
Fax-no.: +44 1442 278071

ua-productsafety.uk@henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

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:



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	Restricted to professional users. Contains Benzothiazole-2-thiol. May produce an allergic reaction.
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.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

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.	content	Classification
Sodium tetraborate pentahydrate 12179-04-3	215-540-4, 215-604-1, 235-541-3, 215-540-4 01-2119490790-32	40- 60 %	Repr. 1B H360FD Eye Irrit. 2 H319 ===== EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC)
Sodium nitrate 7631-99-4	231-554-3 01-2119488221-41	5- < 10 %	Ox. Sol. 3 H272 Eye Irrit. 2 H319
Alcohols, C12-15-branched and linear, 5-15EO 106232-83-1	500-294-5	5- < 10 %	Acute Tox. 4; Oral H302 Eye Dam. 1 H318 Aquatic Chronic 3 H412
Fatty alcohol, C12-14, EO/PO 68439-51-0		1- < 3 %	Aquatic Chronic 3 H412
Disodium hexafluorosilicate 16893-85-9	240-934-8	1- < 3 %	Acute Tox. 3; Inhalation H331 Acute Tox. 3; Dermal H311 Acute Tox. 3; Oral H301
2-(2-Butoxyethoxy)ethanol 112-34-5	203-961-6 01-2119475104-44	1- < 3 %	Eye Irrit. 2 H319
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

For full text of the H - statements and other abbreviations see section 16 "Other information".

Substances without classification may have community workplace exposure limits available.

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:

Fresh air, oxygen supply, warmth; seek specialist medical attention.

Skin contact:

Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing. In case of adverse health effects seek medical advice.

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:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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:

Carbon dioxide, foam, powder
Water spray jet

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

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
Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Disodium tetraborate, anhydrous 12179-04-3 [DISODIUM TETRABORATE, ANHYDROUS]		1	Time Weighted Average (TWA):		EH40 WEL
Disodium tetraborate, anhydrous 12179-04-3 [DISODIUM TETRABORATE, PENTAHYDRATE]		1	Time Weighted Average (TWA):		EH40 WEL
Disodium hexafluorosilicate 16893-85-9 [FLOURIDE (INORGANIC, AS F)]		2,5	Time Weighted Average (TWA):		EH40 WEL
Disodium hexafluorosilicate 16893-85-9 [FLUORIDES, INORGANIC]		2,5	Time Weighted Average (TWA):	Indicative	ECTLV
2-(2-Butoxyethoxy)ethanol 112-34-5 [2-(2-BUTOXYETHOXY)ETHANOL]	10	67,5	Time Weighted Average (TWA):		EH40 WEL
2-(2-Butoxyethoxy)ethanol 112-34-5 [2-(2-BUTOXYETHOXY)ETHANOL]	15	101,2	Short Term Exposure Limit (STEL):		EH40 WEL
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

Occupational Exposure Limits

Valid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Disodium tetraborate, anhydrous 12179-04-3 [BORATES, (TETRA) SODIUM, PENTAHYDRATE]		1	Time Weighted Average (TWA):		IR_OEL
Disodium hexafluorosilicate 16893-85-9 [FLUORIDE (AS F)]		2,5	Time Weighted Average (TWA):		IR_OEL
Disodium hexafluorosilicate 16893-85-9 [FLUORIDES, INORGANIC]		2,5	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Disodium hexafluorosilicate 16893-85-9 [FLUORIDES, INORGANIC]		2,5	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 OELV	IR_OEL
2-(2-Butoxyethoxy)ethanol 112-34-5 [2-(2-BUTOXYETHOXY)ETHANOL]	10	67,5	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
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

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	aqua (intermittent releases)		13,7 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	aqua (freshwater)		0,45 mg/l				
Sodium nitrate 7631-99-4	aqua (marine water)		0,045 mg/l				
Sodium nitrate 7631-99-4	aqua (intermittent releases)		4,5 mg/l				
Sodium nitrate 7631-99-4	sewage treatment plant (STP)		18 mg/l				
2-(2-Butoxyethoxy)ethanol 112-34-5	aqua (freshwater)		1 mg/l				
2-(2-Butoxyethoxy)ethanol 112-34-5	aqua (marine water)		0,1 mg/l				
2-(2-Butoxyethoxy)ethanol 112-34-5	aqua (intermittent releases)		3,9 mg/l				
2-(2-Butoxyethoxy)ethanol 112-34-5	sediment (freshwater)				4 mg/kg		
2-(2-Butoxyethoxy)ethanol 112-34-5	sediment (marine water)				0,4 mg/kg		
2-(2-Butoxyethoxy)ethanol 112-34-5	sewage treatment plant (STP)		200 mg/l				
2-(2-Butoxyethoxy)ethanol 112-34-5	oral				56 mg/kg		
2-(2-Butoxyethoxy)ethanol 112-34-5	soil				0,4 mg/kg		
Benzothiazole-2-thiol 149-30-4	aqua (freshwater)		0,0041 mg/l				
Benzothiazole-2-thiol 149-30-4	aqua (marine water)		0,00041 mg/l				
Benzothiazole-2-thiol 149-30-4	aqua (intermittent releases)		0,005 mg/l				
Benzothiazole-2-thiol 149-30-4	sediment (freshwater)				0,147 mg/kg		
Benzothiazole-2-thiol 149-30-4	sediment (marine water)				0,0147 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/m3	
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/m3	
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	
Sodium nitrate 7631-99-4	Workers	Inhalation	Long term exposure - systemic effects		36,7 mg/m3	
Sodium nitrate 7631-99-4	Workers	dermal	Long term exposure - systemic effects		20,8 mg/kg	
Sodium nitrate 7631-99-4	General population	dermal	Long term exposure - systemic effects		12,5 mg/kg	
Sodium nitrate 7631-99-4	General population	Inhalation	Long term exposure - systemic effects		10,9 mg/m3	
Sodium nitrate 7631-99-4	General population	oral	Long term exposure - systemic effects		12,5 mg/kg	
2-(2-Butoxyethoxy)ethanol 112-34-5	Workers	inhalation	Long term exposure - systemic effects		67,5 mg/m3	
2-(2-Butoxyethoxy)ethanol 112-34-5	Workers	dermal	Long term exposure - systemic effects		83 mg/kg	
2-(2-Butoxyethoxy)ethanol 112-34-5	General population	inhalation	Acute/short term exposure - local effects		60,7 mg/m3	
2-(2-Butoxyethoxy)ethanol 112-34-5	General population	inhalation	Long term exposure - systemic effects		40,5 mg/m3	
2-(2-Butoxyethoxy)ethanol 112-34-5	General population	dermal	Long term exposure - systemic effects		50 mg/kg	
2-(2-Butoxyethoxy)ethanol 112-34-5	Workers	inhalation	Acute/short term exposure - local effects		101,2 mg/m3	
2-(2-Butoxyethoxy)ethanol 112-34-5	Workers	inhalation	Long term exposure - local effects		67,5 mg/m3	
2-(2-Butoxyethoxy)ethanol 112-34-5	General population	oral	Long term exposure - systemic effects		5 mg/kg	
2-(2-Butoxyethoxy)ethanol 112-34-5	General population	inhalation	Long term exposure - local effects		40,5 mg/m3	
Benzothiazole-2-thiol 149-30-4	Workers	inhalation	Acute/short term exposure - systemic effects		70,4 mg/m3	
Benzothiazole-2-thiol 149-30-4	Workers	inhalation	Long term exposure - systemic effects		8,8 mg/m3	
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 -		40 mg/kg	

		systemic effects		
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Biological Exposure Indices:

None

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; \geq 1 mm thickness) or natural rubber (NR; \geq 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; \geq 1 mm thickness) or natural rubber (NR; \geq 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

Appearance	solid material powdery white, up to, yellowish
Odor	no valuation
Odour threshold	No data available / Not applicable
pH (20 °C (68 °F); Conc.: 31,0 g/l)	8,9 - 9,3
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	Not applicable
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Relative vapour density:	No data available / Not applicable
Density	No data available / Not applicable
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable

Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Soluble
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with acids: Heat released.

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 toxicological effects

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	OECD Guideline 401 (Acute Oral Toxicity)
Alcohols, C12-15- branched and linear, 5- 15EO 106232-83-1	LD50	500 - 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	3.800 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
Alcohols, C12-15- branched and linear, 5- 15EO 106232-83-1	LD50	> 2.000 mg/kg	rabbit	not specified
2-(2- Butoxyethoxy)ethanol 112-34-5	LD50	2.764 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
Benzothiazole-2-thiol 149-30-4	LD50	> 7.940 mg/kg	rabbit	not specified

Acute inhalative toxicity:

No substance data available.
No data available.

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	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Fatty alcohol, C12-14, EO/PO 68439-51-0	slightly 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	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
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	moderately irritating		rabbit	not specified

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)
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)
Disodium hexafluorosilicate 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)
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.

SECTION 12: Ecological information

General ecological information:

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

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to 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	383 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	not specified
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, 5-15EO 106232-83-1	LC50	> 1 - 10 mg/l	96 h	Cyprinus carpio	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
Disodium hexafluorosilicate 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	1,6 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to 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, 5-15EO 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	4,1 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to 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, 5-15EO 106232-83-1	NOEC	0,17 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Benzothiazole-2-thiol 149-30-4	NOEC	0,34 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.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Sodium tetraborate pentahydrate 12179-04-3	EC10	24 mg/l	96 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Alcohols, C12-15-branched and linear, 5-15EO 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
Disodium hexafluorosilicate 16893-85-9	EC0	10 mg/l	96 h	Scenedesmus quadricauda	OECD Guideline 201 (Alga, Growth Inhibition Test)
Disodium hexafluorosilicate 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	0,25 mg/l	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to 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	EC0	4.650 mg/l	30 min		not specified
Alcohols, C12-15-branched and linear, 5-15EO 106232-83-1	EC 50	140 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Fatty alcohol, C12-14, EO/PO 68439-51-0	EC0	1.000 mg/l	30 min		not specified
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	EC0	> 1.000 mg/l	18 h		not specified

12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Alcohols, C12-15-branched and linear, 5-15EO 106232-83-1	inherently biodegradable	aerobic	> 80 %	28 d	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
Alcohols, C12-15-branched and linear, 5-15EO 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		aerobic	2,5 %	14 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

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

Hazardous substances CAS-No.	PBT / vPvB
Sodium tetraborate pentahydrate 12179-04-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Sodium nitrate 7631-99-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
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. Other adverse effects

Do not empty into drains, soil or bodies of water.

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**
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. Transport in bulk according to Annex II of Marpol and the IBC Code**
not applicable

SECTION 15: Regulatory information

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

VOC content 0 %
(2010/75/EU)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Great Britain):

Remarks	Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, e.g COSHH Essentials. EH40 Occupational Exposure Limits Chemicals (Hazard Information & Packaging for Supply) Regulations. The Personnel Protective Equipment at Work Regulations. The Carriage of Dangerous Goods by Road Regulations. The Health & Safety at Work Act 1974. (Note: Use latest editions/amendments of above referenced documents.)
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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.

Further information:

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.