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Replacing version dated / version: 05.03.2019 / 0003

Valid from: 21.03.2019 PDF print date: 29.05.2019

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

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

#### 1.1 Product identifier

## **ARISTON**

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

Cleaner

Only for industrial or commercial use.

## **Uses advised against:**

No information available at present.

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

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DR.SCHNELL GmbH & Co. KGaA, Taunusstr. 19, 80807 München, Germany Phone:089/350608-0, Fax:089/350608-47 info@dr-schnell.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:

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Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (DSC)

## **SECTION 2: Hazards identification**

## 2.1 Classification of the substance or mixture

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

Hazard class Hazard category Hazard statement

Eye Dam. 1 H318-Causes serious eye damage. Met. Corr. 1 H290-May be corrosive to metals.

Skin Corr. 1 H314-Causes severe skin burns and eye damage.

#### 2.2 Label elements

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



Danger



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H290-May be corrosive to metals. H314-Causes severe skin burns and eye damage.

P260-Do not breathe vapours or spray. P280-Wear protective gloves / protective clothing / eye protection / face protection. P301+P330+P331-IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353-IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310-Immediately call a POISON CENTER / doctor.

Potassium hydroxide Silicic acid, sodium salt Sulfonic acids, C14-17-sec-alkane, sodium salts Isotridecanol, ethoxylated

#### 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 %).

## **SECTION 3: Composition/information on ingredients**

#### 3.1 Substance

## n.a. 3.2 Mixture

J.Z MIXTUIC	
2-(2-butoxyethoxy)ethanol	Substance for which an EU exposure limit value
	applies.
Registration number (REACH)	01-2119475104-44-XXXX
Index	603-096-00-8
EINECS, ELINCS, NLP	203-961-6
CAS	112-34-5
content %	5-10
Classification according to Regulation (EC) 1272/2008 (CLP)	Eye Irrit. 2, H319

Isotridecanol, ethoxylated	
Registration number (REACH)	
Index	
EINECS, ELINCS, NLP	931-138-8 (REACH-IT List-No.)
CAS	69011-36-5
content %	1-5
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302
	Eye Dam. 1, H318

Isotridecanol, ethoxylated	
Registration number (REACH)	
Index	
EINECS, ELINCS, NLP	931-138-8 (REACH-IT List-No.)
CAS	69011-36-5
content %	1-5
Classification according to Regulation (EC) 1272/2008 (CLP)	Eye Dam. 1, H318
	Aquatic Chronic 3 H412

Silicic acid, sodium salt	
Registration number (REACH)	01-2119448725-31-XXXX
Index	
EINECS, ELINCS, NLP	215-687-4



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CAS	1344-09-8
content %	1-2,5
Classification according to Regulation (EC)	<b>1272/2008 (CLP)</b> Skin Irrit. 2, H315
	Eye Dam. 1, H318

Sulfonic acids, C14-17-sec-alkane, sodium salts	Substance with specific conc. limit(s) acc. to REACh-registration
Registration number (REACH)	01-2119489924-20-XXXX
Index	
EINECS, ELINCS, NLP	307-055-2
CAS	97489-15-1
content %	1-2,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302
	Skin Irrit. 2, H315
	Eye Dam. 1, H318
	Aquatic Chronic 3, H412

Potassium hydroxide	
Registration number (REACH)	01-2119487136-33-XXXX
Index	019-002-00-8
EINECS, ELINCS, NLP	215-181-3
CAS	1310-58-3
content %	0,5-2,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Corr. 1A, H314
	Acute Tox. 4, H302
	Met. Corr. 1, H290
	Eye Dam. 1, H318

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.

## **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

First-aiders should ensure they are protected!

Never pour anything into the mouth of an unconscious person!

#### Inhalation

Remove person from danger area.

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

#### Skin contact

Wash thoroughly using copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.

Cauterizations not treated lead to wounds difficult to heal.

#### **Eve contact**

Remove contact lenses.

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

Protect uninjured eye.

Follow-up examination by an ophthalmologist.

## Ingestion

Rinse the mouth thoroughly with water.

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

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

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

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

Corrosive burns on skin as well as mucous membrane possible.

Necrosis



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Risk of serious damage to eyes.

Corneal damage. Danger of blindness.

Ingestion:

Pain in the mouth and throat Gastrointestinal disturbances Oesophageal perforation

Gastric perforation

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

Symptomatic treatment.

## **SECTION 5: Firefighting measures**

## 5.1 Extinguishing media

## Suitable extinguishing media

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 phosphorus

Oxides of sulphur

Oxides of nitrogen

Toxic gases

## 5.3 Advice for firefighters

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

Do not take any measures that are associated with personal risk or have not been sufficiently trained.

Keep unprotected persons away.

Ensure sufficient supply of air.

Avoid contact with eyes or skin.

If applicable, caution - risk of slipping.

#### 6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent surface and ground-water infiltration, as well as ground penetration.

Prevent from entering drainage system.

If accidental entry into drainage system occurs, inform responsible authorities.

## 6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.

Fill the absorbed material into lockable containers.

Neutralising is possible (only from a specialist).

Diluting with water is possible.

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**



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

## 7.1 Precautions for safe handling

## 7.1.1 General recommendations

Ensure good ventilation.

Avoid contact with eyes or skin.

Handle and open container with care.

There should be an eyewash station and safety shower located near the area of use.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

Use working methods according to operating instructions.

## 7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

## 7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.

Store product closed and only in original packing.

Not to be stored in gangways or stair wells.

Do not store with acids.

Do not use alkali sensitive materials.

Store at room temperature.

Store in a dry place.

#### 7.3 Specific end use(s)

No information available at present.

## **SECTION 8: Exposure controls/personal protection**

## 8.1 Control parameters

Chemical Name	2-(2-butoxyethoxy)ethanol		Content %:5-10
WEL-TWA: 10 ppm (67,5 mg/m	3) (WEL, EU) WEL-STEL: 15 ppm (101,2 mg/m3) (WEL,	EU)	
Monitoring procedures:			
BMGV:	Other informa	tion:	
© Chemical Name	Potassium hydroxide		Content %:0,5- 2,5
WEL-TWA:	WEL-STEL: 2 mg/m3		
Monitoring procedures:	ISO 15202 (Determination of metals and metalloby inductive coupled plasma emission spectrom - 2), 2004 (Part 3) DFG (E), DFG (D) (Alkali metal hydroxides and - 1998 - EU project BC/CEN/ENTR/000/2002-16 OSHA ID-121 (Metal and metalloid particulates - 2002 - EU project BC/CEN/ENTR/000/2002-16 - NIOSH 7401 (Alkaline dusts) - 1994	etry) - 2000(Pa alkali earth hyd card 44-2 (2004 in workplace at	rt 1), 2001(Part roxides) - 2001, 4) mospheres) -
BMGV:	Other informa	tion:	

2-(2-butoxyethoxy)ethanol						
Area of application	Exposure route /	Effect on health	Descripto	Value	Unit	Note
	Environmental		r			
	compartment					
	Environment - freshwater		PNEC	1,1	mg/l	
	Environment - marine		PNEC	0,11	mg/l	



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	Environment - water, sporadic (intermittent) release		PNEC	11	mg/l
	Environment - sediment, freshwater		PNEC	4,4	mg/kg
	Environment - sediment, marine		PNEC	0,44	mg/kg
	Environment - soil		PNEC	0,32	mg/kg
	Environment - sewage treatment plant		PNEC	200	mg/l
Consumer	Human - inhalation	Short term, local effects	DNEL	60,7	mg/m3
Consumer	Human - dermal	Long term, systemic effects	DNEL	50	mg/kg bw/d
Consumer	Human - inhalation	Long term, systemic effects	DNEL	40,5	mg/m3
Consumer	Human - oral	Long term, systemic effects	DNEL	5	mg/kg bw/d
Consumer	Human - inhalation	Long term, local effects	DNEL	40,5	mg/m3
Workers / employees	Human - oral	Long term, local effects	DNEL	67,5	mg/m3
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	89	mg/kg bw/d
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	83	mg/kg bw/d
Workers / employees	Human - inhalation	Short term, local effects	DNEL	101,2	mg/m3
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	67,5	mg/m3

Potassium hydroxide						
Area of application	Exposure route / Environmental compartment	Effect on health	Descripto r	Value	Unit	Note
Consumer	Human - inhalation	Long term, local effects	DNEL	1	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	1	mg/m3	

Silicic acid, sodium salt						
Area of application	Exposure route / Environmental compartment	Effect on health	Descripto r	Value	Unit	Note
	Environment - freshwater		PNEC	7,5	mg/l	
Consumer	Human - dermal	Long term	DNEL	0,8	mg/kg bw/d	
Consumer	Human - inhalation	Long term	DNEL	1,38	mg/kg bw/d	
Consumer	Human - oral	Long term	DNEL	0,8	mg/kg bw/d	
Industrial / commercial	Human - dermal	Long term	DNEL	1,59	mg/kg bw/d	
Industrial / commercial	Human - inhalation	Long term	DNEL	5,61	mg/kg bw/d	

## Sulfonic acids, C14-17-sec-alkane, sodium salts



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Area of application	Exposure route / Environmental	Effect on health	Descripto	Value	Unit	Note
	compartment		r			
	Environment - freshwater		PNEC	0,04	mg/l	
	Environment - marine		PNEC	0,004	mg/l	
	Environment - water,		PNEC	0,06	mg/l	
	sporadic (intermittent)		11120	0,00	1119/1	
	release					
	Environment - sediment,		PNEC	9,4	mg/kg dw	
	freshwater		11120	0,1	mg/kg aw	
	Environment - sediment,		PNEC	0,94	mg/kg dw	
	marine		0	0,0 .	g,g u	
	Environment - soil		PNEC	9,4	mg/kg dw	
	Environment - sewage		PNEC	600	mg/l	
	treatment plant					
	Environment - oral (animal		PNEC	53,3	mg/kg	
	feed)			,	feed	
	Environment - periodic		DNEL	0	mg/kg	
	release					
Consumer	Human - dermal	Long term, systemic	DNEL	3,57	mg/kg	
		effects			bw/d	
Consumer	Human - inhalation	Long term, systemic	DNEL	12,4	mg/m3	
		effects				
Consumer	Human - oral	Long term, systemic	DNEL	7,1	mg/kg	
		effects			bw/d	
Consumer	Human - dermal	Short term, local	DNEL	2,8	mg/cm2	
		effects				
Consumer	Human - dermal	Long term, local	DNEL	2,8	mg/cm2	
		effects				
Workers / employees	Human - dermal	Short term, local	DNEL	2,8	mg/cm2	
		effects				
Workers / employees	Human - dermal	Long term, systemic	DNEL	5	mg/kg	
	<u> </u>	effects			bw/d	
Workers / employees	Human - inhalation	Long term, systemic	DNEL	35	mg/m3	
10.1	<del></del>	effects				
Workers / employees	Human - dermal	Long term, local	DNEL	2,8	mg/cm2	
		effects				

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).

## 8.2 Exposure controls

## 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn. Applies only if maximum permissible exposure values are listed here.

Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. BS EN 14042.

BS EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

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

<sup>(8) =</sup> Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).

<sup>(8) =</sup> Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

<sup>\*\* =</sup> The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.



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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).

If applicable

Face protection (EN 166).

Skin protection - Hand protection:

Use alkali resistant protective gloves (EN 374).

If applicable

Safety gloves made of butyl (EN 374)

Protective Neoprene® / polychloroprene gloves (EN 374).

Protective nitrile gloves (EN 374).

Protective PVC gloves (EN 374)

Minimum layer thickness in mm:

Permeation time (penetration time) in minutes:

Protective hand cream recommended.

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.

Skin protection - Other:

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

Respiratory protection:

Normally not necessary.

If OES or MEL is exceeded.

Gas mask filter A (EN 14387), code colour brown

Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

Not applicable

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents. Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account. Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

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

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

#### 8.2.3 Environmental exposure controls

No information available at present.

## **SECTION 9: Physical and chemical properties**

## 9.1 Information on basic physical and chemical properties

Physical state: Liquid Colour: Fluorescent Characteristic Odour: Odour threshold: Not determined 13,2

pH-value:

Melting point/freezing point: Not determined Initial boiling point and boiling range: Not determined

Flash point: >100 °C

Evaporation rate: Not determined



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Flammability (solid, gas): n.a.

Lower explosive limit:

Upper explosive limit:

Vapour pressure:

Vapour density (air = 1):

Density:

Bulk density:

Not determined

Solubility(ies): Not determined

Water solubility:

Partition coefficient (n-octanol/water):

Auto-ignition temperature:

Decomposition temperature:

Viscosity:

Mixable

Not determined

Not determined

Not determined

Not determined

Explosive properties: Product is not explosive.

Oxidising properties:

9.2 Other information

Miscibility:

Fat solubility / solvent:

Conductivity:

Not determined

Not determined

Surface tension:

Not determined

Not determined

Not determined

Not determined

## **SECTION 10: Stability and reactivity**

## 10.1 Reactivity

Product corrodes metals.

## 10.2 Chemical stability

Stable with proper storage and handling.

## 10.3 Possibility of hazardous reactions

Avoid contact with strong acids (exothermic reaction possible).

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 acids.

Avoid contact with strong oxidizing agents.

Avoid contact with certain metals e.g. aluminium.

Avoid contact with alkali sensitive materials.

## 10.6 Hazardous decomposition products

No decomposition when used as directed.

## **SECTION 11: Toxicological information**

## 11.1 Information on toxicological effects

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	>2000	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.



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Reproductive toxicity:	n.d.a.
Specific target organ toxicity -	n.d.a.
single exposure (STOT-SE):	
Specific target organ toxicity - repeated exposure (STOT-RE):	n.d.a.
Aspiration hazard:	n.d.a.
Symptoms:	n.d.a.

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	2764	mg/kg	Rabbit	OECD 402 (Acute	
route:					Dermal 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	
aaage,ae					Irritation/Corrosion)	
Respiratory or skin				Guinea pig	OECD 406 (Skin	No (skin
sensitisation:				Cuillou pig	Sensitisation)	contact)
Germ cell mutagenicity:					OECD 471 (Bacterial	Negative
Cerm cen matagemeny.					Reverse Mutation	rvegative
					Test)	
Germ cell mutagenicity:					OECD 473 (In Vitro	Negative
Germ cen mutagemony.					Mammalian	ivegative
					Chromosome	
0					Aberration Test) OECD 475	Nisastina
Germ cell mutagenicity:						Negative
					(Mammalian Bone	
					Marrow Chromosome	
					Aberration Test)	
Germ cell mutagenicity:					OECD 476 (In Vitro	Negative
					Mammalian Cell Gene	
					Mutation Test)	
Reproductive toxicity:				Rat	OECD 414 (Prenatal	Negative,
					Developmental	Analogous
					Toxicity Study)	conclusion
Aspiration hazard:						No
Symptoms:						breathing
						difficulties,
						respiratory
						distress,
						diarrhoea,
						coughing,
						mucous
						membrane
						irritation.
						dizziness,
						watering ey
						nausea

Isotridecanol, ethoxylated						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>300-2000	mg/kg	Rat		References
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat		References
Skin corrosion/irritation:				Rabbit		Not irritant,
						References



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Serious eye				Rabbit		Eye Dam.
damage/irritation:						1>10% solution
Respiratory or skin				Guinea pig		Negative,
sensitisation:						References
Germ cell mutagenicity:					OECD 471 (Bacterial	Negative,
					Reverse Mutation Test)	References
Reproductive toxicity:	NOAEL	>250	mg/kg	Rat	OECD 416 (Two-	References
			bw/d		generation	
					Reproduction Toxicity	
					Study)	
Aspiration hazard:						No
Specific target organ toxicity -	NOAEL	50	mg/kg	Rat		Target
repeated exposure (STOT-			bw/d			organ(s): heart,
RE), oral:						Target
						organ(s): liver,
						Target
						organ(s):
						kidneys,
						References

Isotridecanol, ethoxylated	For descript	Malaaa	1116	0	T((b)	N-1
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat		Analogous
						conclusion
Acute toxicity, by dermal	LD50	>2000	mg/kg	Rabbit		Analogous
route:						conclusion
Skin corrosion/irritation:				Rabbit		Not irritant,
						Analogous
						conclusion
Serious eye				Rabbit		Eye Dam.
damage/irritation:						1>10% solution
Respiratory or skin				Guinea pig		Not sensitizising
sensitisation:						
Germ cell mutagenicity:						Negative,
						Analogous
						conclusion
Carcinogenicity:						Negative,
						Analogous
						conclusion
Reproductive toxicity:	NOAEL	50	mg/kg	Rat		
			bw/d			
Reproductive toxicity:	NOAEL	>250	mg/kg	Rat		Analogous
			bw/d			conclusion
Specific target organ toxicity -	NOAEL	50	mg/kg	Rat		Target
repeated exposure (STOT-			bw/d			organ(s): heart,
RE):						Target
						organ(s): liver,
						Target
						organ(s):
						kidneys,
						Analogous
						conclusion

Silicic acid, sodium salt								
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes		
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 401 (Acute			
					Oral Toxicity)			
Acute toxicity, by dermal	LD50	>5000	mg/kg	Rat	U.S. EPA Guidline			
route:					OPPTS 870.1200			



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Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	No (skin contact)
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Reproductive toxicity:	NOAEL	>159	mg/kg bw/d	Rat		
Symptoms:						respiratory distress, coughing, mucous membrane irritation

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>500-2000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Mouse		Analogous conclusion
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Skin Irrit. 2
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Dam. 1
Serious eye damage/irritation:		>10	%			Eye Irrit. 2
Serious eye damage/irritation:		>15	%			Eye Dam. 1
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:						No indication of such an effect.
Carcinogenicity:				Rat		No indication of such an effect.
Reproductive toxicity:		200	mg/kg	Rat		No indication of such an effect.
Aspiration hazard:						No

Potassium hydroxide								
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes		
Acute toxicity, by oral route:	LD50	333-388	mg/kg	Rat	OECD 425 (Acute	1 week		
					Oral Toxicity - Up-and-	observation		
					Down Procedure)			
Serious eye				Rabbit	OECD 405 (Acute	Corrosive		
damage/irritation:					Eye			
					Irritation/Corrosion)			

## **SECTION 12: Ecological information**

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

ARISTON							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.



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12.1. Toxicity to		n.d.a.
daphnia: 12.1. Toxicity to algae:		n.d.a.
12.2. Persistence and		The
degradability:		surfactant(s)
degradability.		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		n.d.a.
and vPvB assessment		
12.6. Other adverse		n.d.a.
effects:		
Other information:		DOC-
		elimination
		degree(complex
		ing organic
		substance)>=
		80%/28d: No

2-(2-butoxyethoxy)ethanol									
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes		
12.1. Toxicity to algae:	NOEC/NOEL	96h	>100	mg/l	Desmodesmus	OECD 201			
					subspicatus	(Alga, Growth			
						Inhibition Test)			
12.1. Toxicity to	NOEC/NOEL	48h	>=100	mg/l	Daphnia magna	OECD 202			
daphnia:						(Daphnia sp.			
•						Acute			
						Immobilisation			
						Test)			



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Toxicity to bacteria:	EC10	30min	>1995	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and	
						Ammonium Oxidation))	
12.3. Bioaccumulative potential:	Log Pow		1			OECD 117 (Partition Coefficient (n- octanol/water) - HPLC method)	
12.1. Toxicity to fish:	LC50	96h	1300	mg/l	Lepomis macrochirus	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.2. Persistence and degradability:		28d	76	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	
12.2. Persistence and degradability:		28d	100	%	activated sludge	OECD 302 B (Inherent Biodegradability - Zahn- Wellens/EMPA Test)	
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Other information:							Does not contain any organically bound halogens which can contribute to the AOX value in waste water.

Isotridecanol, ethoxyla	ated						
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.5. Results of PBT							No PBT
and vPvB assessment							substance, No
							vPvB substance
12.1. Toxicity to fish:	LC50	96h	10-100	mg/l	Brachydanio rerio	OECD 203	
						(Fish, Acute	
						Toxicity Test)	
12.1. Toxicity to fish:	LC50	96h	1 - 10	mg/l	Cyprinus caprio	OECD 203	References
						(Fish, Acute	
						Toxicity Test)	
12.1. Toxicity to	EC50	48h	>1-10	mg/l	Daphnia magna	OECD 202	References
daphnia:						(Daphnia sp.	
						Acute	
						Immobilisation	
						Test)	



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EC50					(Daphnia magna	
EC50						
FC50					Reproduction	
EC50					Test)	
_000	72h	>10-	mg/l	Scenedesmus	OECD 201	
		100		subspicatus	(Alga, Growth	
					Inhibition Test)	
EC50	72h	>1-10	mg/l	Desmodesmus	OECD 201	References
				subspicatus	(Alga, Growth	
					Inhibition Test)	
	28d	>70	%		OECD 301 A	References
					(Ready	
					1	
	28d	>60	%			References
					Co2 Evolution	
					Test)	
Koc		>5000			,	Adsorption in
						ground.
Kow		>5000				Adsorption in
						ground.
EC50		140	mg/l	activated sludge		
EC50		>10000		Pseudomonas	ISO 10712	
				putida		
NOEC/NOEL		10	mg/kg	•	OECD 208	
					(Terrestrial	
					Plants, Growth	
LC50	14d	>1000	ma/ka	Eisenia foetida	OECD 207	
	Kow EC50 EC50	28d  Koc  Kow  EC50 EC50 NOEC/NOEL	28d   >60	28d   >60   %	28d   >70   %	28d   >70   %   OECD 301 A (Ready Biodegradability - DOC Die-Away Test)

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>1-10	mg/l	Cyprinus caprio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	1,36	mg/l	Daphnia magna	QSAR	
12.1. Toxicity to daphnia:	EC50	48h	>1-10	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	>1-10	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	>60	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable
12.3. Bioaccumulative potential:							Not to be expected
Toxicity to bacteria:	EC50		>140	mg/l	Pseudomonas putida	ISO 10712	



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Toxicity to annelids:	LC50	14d	>1000	mg/kg	Eisenia foetida	OECD 207
						(Earthworm,
						Acute Toxicity
						Tests)

Silicic acid, sodium sa Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
						rest method	140163
12.1. Toxicity to fish:	NOEC/NOEL	96h	348	mg/l	Brachydanio rerio		
12.1. Toxicity to fish:	LC50	96h	1108	mg/l	Brachydanio rerio	OECD 203	
						(Fish, Acute	
						Toxicity Test)	
12.1. Toxicity to	EC50	48h	1700	mg/l	Daphnia magna	OECD 202	
daphnia:						(Daphnia sp.	
•						Acute	
						Immobilisation	
						Test)	
12.1. Toxicity to algae:	EC50	72h	207	mg/l		OEĆD 201	
,						(Alga, Growth	
						Inhibition Test)	

Sulfonic acids, C14-17 Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	1 -10	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	110100
12.1. Toxicity to fish:	NOEC/NOEL	28d	0,85	mg/l	Oncorhynchus mykiss	OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study)	
12.1. Toxicity to daphnia:	NOEC/NOEL	22d	0,36	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	EC50	48h	9,81	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	>61	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	96,2	%	activated sludge	OECD 304 A (Inherent Biodegradability in Soil)	Readily biodegradable
12.2. Persistence and degradability:		28d	78	%	activated sludge	OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable
12.2. Persistence and degradability:		28d	89	%	activated sludge	OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)	Readily biodegradable
12.3. Bioaccumulative potential:						<u> </u>	Not accepted due to the log Pow - value.
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance



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Toxicity to bacteria:	NOEC/NOEL	16h	600	mg/l	Pseudomonas putida	DIN 38412 T.8
Other organisms:	NOEC/NOEL	56d	470	mg/kg	Eisenia foetida	OECD 222 (Earthworm Reproduction Test (Eisenia fetida/Eisenia andrei))

Potassium hydroxide							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	80	mg/l	Gambusia affinis		
12.1. Toxicity to fish:	LC50	24h	165	mg/l	Poecilia reticulata		
12.2. Persistence and							Not relevant for
degradability:							inorganic
							substances.
12.3. Bioaccumulative							Not to be
potential:							expected
Toxicity to bacteria:	EC50	15min	22	mg/l	Photobacterium		
					phosphoreum		

## **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**

## **General statements**

14.1. UN number: 1814

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

14.2. UN proper shipping name:

UN 1814 POTASSIUM HYDROXIDE, SOLUTION, MIXTURE

14.3. Transport hazard class(es):
14.4. Packing group:
Classification code:
C5
LQ:
5 L

14.5. Environmental hazards: Not applicable

Tunnel restriction code:

## Transport by sea (IMDG-code)

14.2. UN proper shipping name:

POTASSIUM HYDROXIDE SOLUTION, MIXTURE







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14.3. Transport hazard class(es):814.4. Packing group:IIIEmS:F-A, S-BMarine Pollutant:n.a

14.5. Environmental hazards:

Not applicable

Transport by air (IATA)

14.2. UN proper shipping name: Potassium hydroxide, solution mixture

14.3. Transport hazard class(es):

8
14.4. Packing group:

III

14.5. Environmental hazards: Not applicable

14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.

All persons involved in transporting must observe safety regulations.

Precautions must be taken to prevent damage.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

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

Minimum amount regulations have not been taken into account.

Danger code and packing code on request.

Comply with special provisions.

## **SECTION 15: Regulatory information**

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

0.22 %

Observe restrictions:

Regulation (EC) No 1907/2006, Annex XVII

2-(2-butoxyethoxy)ethanol

Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC):

REGULATION (EC) No 648/2004

5 % or over but less than 15 % non-ionic surfactants less than 5 % anionic surfactants phosphonates

perfumes

LIMONENE

LINALOOL

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

## 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## **SECTION 16: Other information**

Revised sections:

2, 10, 15, 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):





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Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Eye Dam. 1, H318	Classification based on the pH value.
Met. Corr. 1, H290	Classification based on test data.
Skin Corr. 1, H314	Classification based on the pH value.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H314 Causes severe skin burns and eye damage.

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

Eye Dam. — Serious eye damage Met. Corr. — Substance or mixture corrosive to metals Skin Corr. — Skin corrosion

Eye Irrit. — Eye irritation

Acute Tox. — Acute toxicity - oral

Aquatic Chronic — Hazardous to the aquatic environment - chronic

Skin Irrit. — Skin irritation

## Any abbreviations and acronyms used in this document:

AC **Article Categories** 

according, according to acc., acc. to

ACGIH American Conference of Governmental Industrial Hygienists

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOEL Acceptable Operator Exposure Level

AOX Adsorbable organic halogen compounds

approximately approx. Art., Art. no. Article number

ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)

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

BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)

Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)

BMGV Biological monitoring guidance value (EH40, UK)

BOD Biochemical oxygen demand

BSEF Bromine Science and Environmental Forum

bw body weight

**Chemical Abstracts Service** CAS

CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids

CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques

CIPAC Collaborative International Pesticides Analytical Council

Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

COD Chemical oxygen demand

CTFA Cosmetic, Toiletry, and Fragrance Association

DMEL Derived Minimum Effect Level

DNEL Derived No Effect Level

DOC Dissolved organic carbon

DT50 Dwell Time - 50% reduction of start concentration



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DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EC European Community
ECHA European Chemicals Agency
EEA European Economic Area
EEC European Economic Community

EINECS European Inventory of Existing Commercial Chemical Substances

ELINCS European List of Notified Chemical Substances

EN European Norms

EPA United States Environmental Protection Agency (United States of America)

**ERC** Environmental Release Categories

ES Exposure scenario

etc. et cetera

EU European Union

EWC European Waste Catalogue

Fax. Fax number gen. general

GHS Globally Harmonized System of Classification and Labelling of Chemicals

GWP Global warming potential

HET-CAM Hen's Egg Test - Chorionallantoic Membrane

HGWP Halocarbon Global Warming Potential

IARC International Agency for Research on Cancer

IATA International Air Transport Association

IBC Intermediate Bulk Container

IBC (Code) International Bulk Chemical (Code)

IC Inhibitory concentration

IMDG-code International Maritime Code for Dangerous Goods

incl. including, inclusive

IUCLIDInternational Uniform ChemicaL Information Database

LC lethal concentration

LC50 lethal concentration 50 percent kill LCLo lowest published lethal concentration

LD Lethal Dose of a chemical LD50 Lethal Dose, 50% kill LDLo Lethal Dose Low

LOAELLowest Observed Adverse Effect Level LOEC Lowest Observed Effect Concentration

LOEL Lowest Observed Effect Level

LQ Limited Quantities

MARPOL International Convention for the Prevention of Marine Pollution from Ships

n.a. not applicablen.av. not availablen.c. not checkedn.d.a. no data available

NIOSH National Institute of Occupational Safety and Health (United States of America)

NOAEC No Observed Adverse Effective Concentration

NOAEL No Observed Adverse Effect Level

NOEC No Observed Effect Level

NOEL No Observed Effect Level ODP Ozone Depletion Potential

OECD Organisation for Economic Co-operation and Development

org. organic

PAH polycyclic aromatic hydrocarbon PBT persistent, bioaccumulative and toxic

PC Chemical product category

PE Polyethylene

PNEC Predicted No Effect Concentration POCP Photochemical ozone creation potential

ppm parts per million PROC Process category PTFE Polytetrafluorethylene



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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. 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)

SADT Self-Accelerating Decomposition Temperature

SAR Structure Activity Relationship

SU Sector of use

SVHC Substances of Very High Concern

Tel. Telephone

ThOD Theoretical oxygen demand

TOC Total organic carbon

TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)

UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).

WHO World Health Organization

wwt wet weight

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:

## Chemical Check GmbH, Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90

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