

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

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# BONDERITE C-IC 624 MOD ACID CLEANER known as DEOXIDINE 624 MOD 25KGS

SDS No. : 247397 V006.0 Revision: 19.10.2021 printing date: 20.10.2021 Replaces version from: 15.03.2019

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

#### 1.1. Product identifier

BONDERITE C-IC 624 MOD ACID CLEANER known as DEOXIDINE 624 MOD 25KGS

Supplied by:

Sil-Mid Limited

T: 01675 432850 E: info@silmid.com

Roman Park, Roman Way Coleshill, West Midlands B46 1HG. UK

#### **1.2. Relevant identified uses of the substance or mixture and uses advised against** Intended use:

Aluminium Etching Agents

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

Henkel Ltd Adhesives Wood Lane End HP2 4RQ Hemel Hempstead

Great Britain

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

ua-productsafety.uk@henkel.com

For Safety Data Sheet updates please visit our website https://mysds.henkel.com/index.html#/appSelection or www.henkel-adhesives.com.

Emergency Telephone No. +44 (0)1675 432850 (Monday to Friday, 08:00 – 17:30 – GMT)

#### 1.4. Emergency telephone number

24 Hours Emergency Tel: +44 0 8701 906777 - For further general health & safety, technical and practical advice on this product, please call +44 (0) 1606 593933 or write to: Technical Services; Henkel Limited; Road 5; Winsford Industrial Estate; Winsford; Cheshire; CW7 3QY-Email: technical.services@henkel.co.uk

## **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

Classification (CLP):	
Corrosive to metals	Category 1
H290 May be corrosive to metals.	
Skin corrosion	Category 1
H314 Causes severe skin burns and eye damage.	
Serious eye damage	Category 1
H318 Causes serious eye damage.	

#### 2.2. Label elements

#### Label elements (CLP):

Hazard pictogram:	
Signal word:	Danger
Hazard statement:	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage.
Supplemental information	Contains: 1,3-Dibutyl-2-thiourea May produce an allergic reaction.
Precautionary statement: Prevention	P260 Do not breathe mist/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statement: Response	<ul> <li>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.</li> <li>Rinse skin with water [or shower].</li> <li>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P310 Immediately call a POISON CENTER or doctor.</li> </ul>

## 2.3. Other hazards

None if used properly.

The classification as corrosive H314 category 1 is due to the extreme pH. 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	EC Number	content	Classification
CAS-No.	<b>REACH-Reg No.</b>		
Phosphoric acid	231-633-2	20- 40 %	Met. Corr. 1
7664-38-2	01-2119485924-24		H290
			Skin Corr. 1B
			H314
			Acute Tox. 4; Oral
			H302
2-Butoxyethanol	203-905-0	5- < 10 %	Skin Irrit. 2
111-76-2	01-2119475108-36		H315
			Eye Irrit. 2
			H319
			Acute Tox. 4; Oral
			H302
			Acute Tox. 4; Inhalation
			H332
1,3-Dibutyl-2-thiourea	203-674-6	0,01 - < 0,1 %	Acute Tox. 4; Dermal
109-46-6			H312
			Skin Sens. 1A
			H317
			Carc. 2
			H351
			STOT RE 1
			H372
			Aquatic Chronic 2
			H411

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 % < 5 % phosphates non-ionic surfactants

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

#### 4.1. Description of first aid measures

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Immediately rinse with copious amounts of running water (for 10 minutes). Remove contaminated clothes. Put on a bandage with sterile gauze, seek medical attention in hospital.

Eye contact:

Immediately flush eyes with soft jet of water or eye rinse solution for at least 15 minutes. Hold eyelid wide-open. Seek a doctor/hospital, eye flushing should continue during transportation to a doctor.

Ingestion:

Rinse out mouth, drink 1-2 glasses of water, do not induce vomiting. Immediate medical treatment necessary.

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

Causes burns.

**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:

All common extinguishing agents are suitable.

Extinguishing media which must not be used for safety reasons: None known

**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:

Cool endangered containers with water spray jet.

# **SECTION 6: Accidental release measures**

# **6.1. Personal precautions, protective equipment and emergency procedures** 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

Dispose of contaminated material as waste according to Section 13. Neutralize with acid-binding material (e.g. powdered limestone). Take up with liquid-absorbing material (sand).

#### 6.4. Reference to other sections

See advice in section 8

# **SECTION 7: Handling and storage**

## 7.1. Precautions for safe handling

When diluting, always stir slowly the product into standing water. 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.Wash contaminated clothing before reuse.The workplace should be equipped with an emergency shower and eye-rinsing facility.

## 7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container. Store in a dry place. Keep container in a well ventilated place. Keep container tightly sealed. Store in a cool place. Keep only in original container. Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

#### 7.3. Specific end use(s)

Aluminium Etching Agents

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

# 8.1. Control parameters

# **Occupational Exposure Limits**

Valid for

Great Britain

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Orthophosphoric acid 7664-38-2 [ORTHOPHOSPHORIC ACID]		1	Time Weighted Average (TWA):		EH40 WEL
Orthophosphoric acid 7664-38-2 [ORTHOPHOSPHORIC ACID]		2	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Orthophosphoric acid 7664-38-2 [ORTHOPHOSPHORIC ACID]		1	Time Weighted Average (TWA):	Indicative	ECTLV
Orthophosphoric acid 7664-38-2 [ORTHOPHOSPHORIC ACID]		2	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL
2-Butoxyethanol 111-76-2 [2-BUTOXYETHANOL]	25	123	Time Weighted Average (TWA):		EH40 WEL
2-Butoxyethanol 111-76-2 [2-BUTOXYETHANOL]			Skin designation:	Can be absorbed through the skin.	EH40 WEL
2-Butoxyethanol 111-76-2 [2-BUTOXYETHANOL]	20	98	Time Weighted Average (TWA):	Indicative	ECTLV
2-Butoxyethanol 111-76-2 [2-BUTOXYETHANOL]	50	246	Short Term Exposure Limit (STEL):	Indicative	ECTLV
2-Butoxyethanol 111-76-2 [2-BUTOXYETHANOL]	50	246	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL

# **Occupational Exposure Limits**

Valid for

Ireland

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Orthophosphoric acid 7664-38-2 [ORTHOPHOSPHORIC ACID]		1	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Orthophosphoric acid 7664-38-2 [ORTHOPHOSPHORIC ACID]		2	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Orthophosphoric acid 7664-38-2 [ORTHOPHOSPHORIC ACID]		1	Time Weighted Average (TWA):	Indicative	ECTLV
Orthophosphoric acid 7664-38-2 [ORTHOPHOSPHORIC ACID]		2	Short Term Exposure Limit (STEL):	15 minutes Indicative OELV	IR_OEL
2-Butoxyethanol 111-76-2 [2-BUTOXYETHANOL (EGBE)]	50	246	Short Term Exposure Limit (STEL):	15 minutes Indicative OELV	IR_OEL
2-Butoxyethanol 111-76-2 [2-BUTOXYETHANOL (EGBE)]	20	98	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
2-Butoxyethanol 111-76-2 [2-BUTOXYETHANOL (EGBE)]			Skin designation:	Can be absorbed through the skin.	IR_OEL
2-Butoxyethanol 111-76-2 [2-BUTOXYETHANOL]	20	98	Time Weighted Average (TWA):	Indicative	ECTLV
2-Butoxyethanol 111-76-2	50	246	Short Term Exposure Limit (STEL):	Indicative	ECTLV

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[2-BUTOXYETHANOL]			

# Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
phosphoric acid	sediment						no hazard identified
7664-38-2	(freshwater)						
phosphoric acid	sediment						no hazard identified
7664-38-2	(marine water)						
phosphoric acid 7664-38-2	Air						no hazard identified
phosphoric acid 7664-38-2	Soil						no hazard identified
phosphoric acid 7664-38-2	Predator						no potential for bioaccumulation
2-butoxyethanol	aqua		8,8 mg/l				bioaccumulation
111-76-2	(freshwater)		5,5 mg/1				
2-butoxyethanol	aqua (marine		0,88 mg/l				
111-76-2 2-butoxyethanol	water)		463 mg/l			1	
111-76-2	sewage treatment plant (STP)		463 mg/1				
2-butoxyethanol	sediment				34,6 mg/kg		
111-76-2	(freshwater)						
2-butoxyethanol	sediment				3,46 mg/kg		
111-76-2	(marine water)						
2-butoxyethanol	Soil				2,33 mg/kg		
111-76-2							
2-butoxyethanol 111-76-2	oral				20 mg/kg		
2-butoxyethanol	freshwater -		26,4 mg/l				
111-76-2	intermittent						
1,3-Dibutyl-2-thiourea	aqua		0,004 mg/l				
109-46-6	(freshwater)						
1,3-Dibutyl-2-thiourea 109-46-6	aqua (intermittent releases)		0,038 mg/l				
1,3-Dibutyl-2-thiourea	aqua (marine		0 mg/l				
109-46-6	water)						
1,3-Dibutyl-2-thiourea	sediment				0,177		
109-46-6	(freshwater)				mg/kg		
1,3-Dibutyl-2-thiourea	sediment				0,018		
109-46-6	(marine water)				mg/kg		
1,3-Dibutyl-2-thiourea 109-46-6	Soil				0,033 mg/kg		
1,3-Dibutyl-2-thiourea	sewage		10 mg/l				
109-46-6	treatment plant (STP)		10 1161				

# Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
phosphoric acid 7664-38-2	Workers	inhalation	Long term exposure - systemic effects		10,7 mg/m3	no hazard identified
phosphoric acid 7664-38-2	General population	inhalation	Long term exposure - systemic effects		4,57 mg/m3	no hazard identified
phosphoric acid 7664-38-2	General population	inhalation	Long term exposure - local effects		0,36 mg/m3	no hazard identified
phosphoric acid 7664-38-2	General population	oral	Long term exposure - systemic effects		0,1 mg/kg	no hazard identified
phosphoric acid 7664-38-2	Workers	inhalation	Long term exposure - local effects		1 mg/m3	no hazard identified
phosphoric acid 7664-38-2	Workers	inhalation	Acute/short term exposure - local effects		2 mg/m3	no hazard identified
2-butoxyethanol 111-76-2	Workers	inhalation	Long term exposure - systemic effects		98 mg/m3	
2-butoxyethanol 111-76-2	Workers	inhalation	Acute/short term exposure - local effects		246 mg/m3	
2-butoxyethanol 111-76-2	Workers	inhalation	Acute/short term exposure - systemic effects		1091 mg/m3	
2-butoxyethanol 111-76-2	General population	inhalation	Long term exposure - systemic effects		59 mg/m3	
2-butoxyethanol 111-76-2	General population	inhalation	Acute/short term exposure - systemic effects		426 mg/m3	
2-butoxyethanol 111-76-2	General population	inhalation	Acute/short term exposure - local effects		147 mg/m3	
2-butoxyethanol 111-76-2	General population	oral	Long term exposure - systemic effects		6,3 mg/kg	
2-butoxyethanol 111-76-2	General population	oral	Acute/short term exposure - systemic effects		26,7 mg/kg	
1,3-Dibutyl-2-thiourea 109-46-6	Workers	inhalation	Long term exposure - systemic effects		0,14 mg/m3	
1,3-Dibutyl-2-thiourea 109-46-6	Workers	dermal	Long term exposure - systemic effects		2,08 mg/kg	
1,3-Dibutyl-2-thiourea 109-46-6	General population	inhalation	Long term exposure - systemic effects		0,04 mg/m3	
1,3-Dibutyl-2-thiourea 109-46-6	General population	dermal	Long term exposure - systemic effects		1,04 mg/kg	
1,3-Dibutyl-2-thiourea 109-46-6	General population	oral	Long term exposure - systemic effects		0,02 mg/kg	

#### **Biological Exposure Indices:**

Ingredient [Regulated substance]		Biological specimen	Sampling time	 Basis of biol. exposure index	 Additional Information
2-Butoxyethanol	Butoxyacetic	Creatinine in	Sampling time: End of	UKEH40BMG	
111-76-2	acid	urine	shift.	V	
[2-BUTOXYETHANOL]					

#### 8.2. Exposure controls:

Engineering controls: Ensure good ventilation/suction at the workplace.

Respiratory protection:

In case of aerosol formation, we recommend wearing of appropriate respiratory protection equipment with ABEK P2 filter (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: Protective clothing that covers arms and legs. 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**

Colorless, up to, Pale

No data available / Not applicable

slightly, sour/acid

#### 9.1. Information on basic physical and chemical properties

Appearance

pН

Odor Odour threshold

(20 °C (68 °F); Conc.: 100 % product) Melting point Solidification temperature Initial boiling point Flash point Evaporation rate Flammability Explosive limits Vapour pressure < 2

liquid clear

yellow

No data available / Not applicable No data available / Not applicable > 100 °C (> 212 °F) No flash point up to 100°C. Aqueous preparation. No data available / Not applicable No data available / Not applicable No data available / Not applicable No data available / Not applicable

Relative vapour density: Density
(20 °C (68 °F))
Bulk density
Solubility
Solubility (qualitative)
(20 °C (68 °F); Solvent: Water)
Partition coefficient: n-octanol/water
Auto-ignition temperature
Decomposition temperature
Viscosity
Viscosity (kinematic)
Explosive properties
Oxidising properties

#### 9.2. Other information

No data available / Not applicable

No data available / Not applicable 1,13 - 1,17 g/cm3

No data available / Not applicable No data available / Not applicable Miscible

No data available / Not applicable No data available / Not applicable

# **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

Reaction with strong bases

#### 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**

#### General toxicological information:

The classification as corrosive H314 category 1 is due to the extreme pH.

#### 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
Phosphoric acid 7664-38-2	Acute toxicity estimate (ATE)	1.500 mg/kg		Expert judgement
2-Butoxyethanol 111-76-2	Acute toxicity estimate (ATE)	1.200 mg/kg		Expert judgement
1,3-Dibutyl-2-thiourea 109-46-6	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
1,3-Dibutyl-2-thiourea 109-46-6	Acute toxicity estimate (ATE)	2.500 mg/kg		Expert judgement

#### 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
2-Butoxyethanol 111-76-2	LD0	> 2.000 mg/kg	guinea pig	OECD Guideline 402 (Acute Dermal Toxicity)
2-Butoxyethanol 111-76-2	LD50	> 2.000 mg/kg	guinea pig	OECD Guideline 402 (Acute Dermal Toxicity)
1,3-Dibutyl-2-thiourea 109-46-6	LD50	2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)

#### 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
Phosphoric acid 7664-38-2	corrosive	24 h	rabbit	not specified
2-Butoxyethanol 111-76-2	irritating	4 h	rabbit	EU Method B.4 (Acute Toxicity: Dermal Irritation / Corrosion)

#### 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
2-Butoxyethanol 111-76-2	irritating	24 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

#### **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
2-Butoxyethanol 111-76-2	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
1,3-Dibutyl-2-thiourea 109-46-6	sensitising	Guinea pig maximisation test	guinea pig	not specified

#### 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
Phosphoric acid 7664-38-2	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Phosphoric acid 7664-38-2	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Phosphoric acid 7664-38-2	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
2-Butoxyethanol 111-76-2	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2-Butoxyethanol 111-76-2	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
2-Butoxyethanol 111-76-2	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

#### 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
1,3-Dibutyl-2-thiourea	carcinogenic	oral: feed	103 weeks	rat	male/female	not specified
109-46-6	-		daily			_

# **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
Phosphoric acid 7664-38-2	NOAEL P 500 mg/kg NOAEL F1 500 mg/kg	one- generation study	oral: gavage	rat	OECD Combined Repeated Dose and Reproductive / Developmental Toxicity Screening Test (Precursor Protocol of GL 422)
2-Butoxyethanol 111-76-2	NOAEL P 720 mg/kg NOAEL F1 720 mg/kg NOAEL F2 720 mg/kg	Two generation study	oral: drinking water	mouse	not specified

#### 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
Phosphoric acid 7664-38-2	NOAEL 250 mg/kg	oral: gavage	6 w daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
2-Butoxyethanol 111-76-2	NOAEL 0,121 mg/l	inhalation	42 or 90 days 6 hours/day, 5 days/week	rat	not specified
2-Butoxyethanol 111-76-2	NOAEL < 69 mg/kg	oral: drinking water	90 d continous	rat	equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
1,3-Dibutyl-2-thiourea 109-46-6	NOAEL 7,35 mg/kg	oral: feed	7 w daily	rat	not specified

#### Aspiration hazard:

No data available.

# **SECTION 12: Ecological information**

#### General ecological information:

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

Locally harmful for aquatic and landliving organisms because of low pH and corrosive properties.

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.

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Phosphoric acid 7664-38-2	LC50	> 100 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Butoxyethanol 111-76-2	LC50	1.474 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Butoxyethanol 111-76-2	NOEC	> 100 mg/l	21 d	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
1,3-Dibutyl-2-thiourea 109-46-6	LC50	17,8 mg/l	96 h	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	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Phosphoric acid	EC50	> 100 mg/l	48 h	Daphnia magna	OECD Guideline 202
7664-38-2		-			(Daphnia sp. Acute
					Immobilisation Test)
2-Butoxyethanol	EC50	1.550 mg/l	48 h	Daphnia magna	OECD Guideline 202
111-76-2					(Daphnia sp. Acute
					Immobilisation Test)
1,3-Dibutyl-2-thiourea	EC50	3,8 mg/l	48 h	Daphnia magna	OECD Guideline 202
109-46-6					(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
2-Butoxyethanol	NOEC	100 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia
111-76-2					magna, Reproduction Test)

Toxicity (Algae):

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

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Phosphoric acid 7664-38-2	EC50	> 100 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Phosphoric acid 7664-38-2	NOEC	100 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Butoxyethanol 111-76-2	EC50	1.840 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Butoxyethanol 111-76-2	NOEC	286 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,3-Dibutyl-2-thiourea 109-46-6	EC50	6,9 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,3-Dibutyl-2-thiourea 109-46-6	EC10	4 mg/l	72 h	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	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Phosphoric acid	IC50	270 mg/l	3 h	activated sludge	OECD Guideline 209
7664-38-2		-		_	(Activated Sludge,
					Respiration Inhibition Test)
2-Butoxyethanol	EC0	1.000 mg/l	30 min		not specified
111-76-2					

## 12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
2-Butoxyethanol 111-76-2	readily biodegradable	aerobic	73 %	30 d	EU Method C.4-E (Determination of the "Ready" BiodegradabilityClosed Bottle Test)
1,3-Dibutyl-2-thiourea 109-46-6	not readily biodegradable.	aerobic	0 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

## 12.3. Bioaccumulative potential

No data available.

#### 12.4. Mobility in soil

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Hazardous substances	LogPow	Temperature	Method
CAS-No.			
2-Butoxyethanol	0,81	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake
111-76-2			Flask Method)
1,3-Dibutyl-2-thiourea	2,75		OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake
109-46-6			Flask Method)

#### 12.5. Results of PBT and vPvB assessment

Hazardous substances	PBT / vPvB
CAS-No.	
Phosphoric acid	According to Annex XIII of regulation (EC) 1907/2006 a PBT and vPvB assessment shall not
7664-38-2	be conducted for inorganic substances.
2-Butoxyethanol	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
111-76-2	Bioaccumulative (vPvB) criteria.
1,3-Dibutyl-2-thiourea	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
109-46-6	Bioaccumulative (vPvB) criteria.

#### 12.6. 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

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.

EWC/EAK 070608

# **SECTION 14: Transport information**

#### 14.1. **UN number**

1805
1805
1805
1805
1805

#### 14.2. UN proper shipping name

ADR	PHOSPHORIC ACID SOLUTION
RID	PHOSPHORIC ACID SOLUTION
ADN	PHOSPHORIC ACID SOLUTION
IMDG	PHOSPHORIC ACID SOLUTION
IATA	Phosphoric acid, solution

#### 14.3. Transport hazard class(es)

ADR	8
RID	8
ADN	8
IMDG	8
IATA	8

#### 14.4. Packing group

ADR	III
RID	III
ADN	III
IMDG	III
IATA	III

#### 14.5. **Environmental hazards**

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

#### 14.6. Special precautions for user

ADR	not applicable	
	Tunnelcode: (E)	
RID	not applicable	
ADN	not applicable	
IMDG	not applicable	
IATA	not applicable	

#### 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				
Ozone Depleting Substance (0	DDS) (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	7,9 %			
(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.)

#### **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:

- H290 May be corrosive to metals.
- H302 Harmful if swallowed.

H312 Harmful in contact with skin.

- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

- H332 Harmful if inhaled.
- H351 Suspected of causing cancer.

H372 Causes damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

#### **Further information:**

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