

Complex VB13

Revision: 2024-08-01

Version: 04.0

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

1.1 Product identifier

Trade name: Complex VB13

UFI: 2142-00CA-400F-DWKD

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

Product use:	Cleaning in place chemical. For professional and industrial use only.
Uses advised against:	Uses other than those identified are not recommended.

SWED - Sector-specific worker exposure description :

AISE_SWED_PW_8b_1
AISE_SWED_IS_8b_1
AISE_SWED_PW_1_1
AISE_SWED_PW_4_1
AISE_SWED_PW_11_1
AISE_SWED_IS_1_1
AISE_SWED_IS_4_1

1.3 Details of the supplier of the safety data sheet

Diversey Europe Operations BV, De Corridor 4, 3621ZB Breukelen [Maarssenbroeksedijk 2, 3542DN Utrecht], The Netherlands

Contact details

Diversey Ltd
Weston Favell Centre, Northampton NN3 8PD, United Kingdom
Tel: 01604 405311, Fax: 01604 406809
Regulatory Email: customerservice.uk@solenis.com

1.4 Emergency telephone number

Seek medical advice (show the label or safety data sheet where possible)
For medical or environmental emergency only:
call 0800 052 0185

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Skin corrosion, Category 1 (H314)
Specific target organ toxicity - Repeated exposure, Category 2 (H373)
Serious eye damage, Category 1 (H318)
Corrosive to metals, Category 1 (H290)

2.2 Label elements



Signal word: Danger.

Contains tetrasodium ethylene diamine tetraacetate (Tetrasodium EDTA), tetrapotassium ethylene diamine tetraacetate (Tetrapotassium EDTA), dipotassium metasilicate (Potassium Metasilicate)

Hazard statements:

H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.
H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

P280 - Wear protective gloves, protective clothing and eye or face protection.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

Complex VB13

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 CENTRE, doctor or physician.

2.3 Other hazards

No other hazards known.

SECTION 3: Composition/information on ingredients**3.2 Mixtures**

Ingredient(s)	EC number	CAS number	REACH number	Classification	Notes	Weight percent
tetrasodium ethylene diamine tetraacetate	200-573-9	64-02-8	[1]	Acute toxicity - Oral, Category 4 (H302) Acute toxicity - Inhalation, Category 4 (H332) Specific target organ toxicity - Repeated exposure, Category 2 (H373) Serious eye damage, Category 1 (H318)		20-30
tetrapotassium ethylene diamine tetraacetate	230-943-5	7379-27-3	[1]	Acute toxicity - Oral, Category 4 (H302) Acute toxicity - Inhalation, Category 4 (H332) Specific target organ toxicity - Repeated exposure, Category 2 (H373) Serious eye damage, Category 1 (H318)		10-20
Alkyl aryl phosphate polyether ester, potassium salt	[4]	-	[4]	Skin irritation, Category 2 (H315) Eye irritation, Category 2 (H319) Chronic aquatic toxicity, Category 3 (H412)		1-3
dipotassium metasilicate	215-199-1	1312-76-1	[1]	Skin corrosion, Category 1B (H314) Specific target organ toxicity - Single exposure, Category 3 (H335) Serious eye damage, Category 1 (H318) Corrosive to metals, Category 1 (H290)		1-3
sodium hydroxide	215-185-5	1310-73-2	01-211945789 2-27	Skin corrosion, Category 1A (H314) Corrosive to metals, Category 1 (H290)		0.1-1

Specific concentration limits

sodium hydroxide:

- Serious eye damage, Category 1 (H318) >= 2% > Eye irritation, Category 2 (H319) >= 0.5%
- Skin corrosion, Category 1A (H314) >= 5% > Skin corrosion, Category 1B (H314) >= 2% > Skin irritation, Category 2 (H315) >= 0.5%

Workplace exposure limit(s), if available, are listed in subsection 8.1.

ATE, if available, are listed in section 11.

[1] Exempted: ionic mixture. See Regulation (EC) No 1907/2006, Annex V, paragraph 3 and 4. This salt is potentially present, based on calculation, and included for classification and labelling purposes only. Each starting material of the ionic mixture is registered, as required.

[4] Exempted: polymer. See Article 2(9) of Regulation (EC) No 1907/2006.

For the full text of the H and EUH phrases mentioned in this Section, see Section 16..

SECTION 4: First aid measures**4.1 Description of first aid measures****General Information:**

Symptoms of intoxication may even occur after several hours. It is recommended to continue medical observation for at least 48 hours after the incident. If unconscious place in recovery position and seek medical advice. Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Get medical attention or advice if you feel unwell.

Inhalation:

Remove person to fresh air and keep comfortable for breathing. Get medical attention or advice if you feel unwell.

Skin contact:

Wash skin with plenty of lukewarm, gently flowing water for at least 30 minutes. Take off immediately all contaminated clothing and wash it before reuse. Immediately call a POISON CENTRE, doctor or physician.

Eye contact:

Hold eyelids apart and flush eyes with plenty of lukewarm water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE, doctor or physician.

Ingestion:

Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Keep at rest. Immediately call a POISON CENTRE, doctor or physician.

Self-protection of first aider:

Consider personal protective equipment as indicated in subsection 8.2.

4.2 Most important symptoms and effects, both acute and delayed**Inhalation:**

No known effects or symptoms in normal use.

Skin contact:

Causes severe burns.

Eye contact:

Causes severe or permanent damage.

Ingestion:

Ingestion will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.

Complex VB13

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

No special hazards known.

5.3 Advice for firefighters

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Wear suitable protective clothing. Wear eye/face protection. Wear suitable gloves.

6.2 Environmental precautions

Dilute with plenty of water. Do not allow to enter drainage system, surface or ground water.

6.3 Methods and material for containment and cleaning up

Dyke to collect large liquid spills. Use neutralising agent. Absorb with liquid-binding material (sand, diatomite, universal binders). Do not place spilled materials back into the original container. Collect in closed and suitable containers for disposal.

6.4 Reference to other sections

For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Measures to prevent fire and explosions:**

No special precautions required.

Measures required to protect the environment:

For environmental exposure controls see subsection 8.2.

Advices on general occupational hygiene:

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless advised by Diversey. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Avoid contact with skin and eyes. Use only with adequate ventilation. See chapter 8.2, Exposure controls / Personal protection.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local and national regulations. Store in a closed container. Keep only in original packaging.

For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

7.3 Specific end use(s)

No specific advice for end use available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Workplace exposure limits**

Air limit values, if available:

Ingredient(s)	UK - Long term value(s)	UK - Short term value(s)
sodium hydroxide		2 mg/m ³

Biological limit values, if available:

Recommended monitoring procedures, if available:

Additional exposure limits under the conditions of use, if available:

DNEL/DMEL and PNEC values**Human exposure**

DNEL/DMEL oral exposure - Consumer (mg/kg bw)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
tetrasodium ethylene diamine tetraacetate	-	-	-	25
tetrapotassium ethylene diamine tetraacetate	No data available	No data available	No data available	No data available
Alkyl aryl phosphate polyether ester, potassium salt	No data available	No data available	No data available	No data available
dipotassium metasilicate	No data available	No data available	No data available	No data available
sodium hydroxide	-	-	-	-

DNEL/DMEL dermal exposure - Worker

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
tetrasodium ethylene diamine tetraacetate	-	-	-	-
tetrapotassium ethylene diamine tetraacetate	No data available	No data available	No data available	No data available
Alkyl aryl phosphate polyether ester, potassium salt	No data available	No data available	No data available	No data available
dipotassium metasilicate	No data available	No data available	No data available	No data available
sodium hydroxide	2 %	-	-	-

DNEL/DMEL dermal exposure - Consumer

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
tetrasodium ethylene diamine tetraacetate	-	-	-	-
tetrapotassium ethylene diamine tetraacetate	No data available	No data available	No data available	No data available
Alkyl aryl phosphate polyether ester, potassium salt	No data available	No data available	No data available	No data available
dipotassium metasilicate	No data available	No data available	No data available	No data available
sodium hydroxide	2 %	-	-	-

DNEL/DMEL inhalatory exposure - Worker (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
tetrasodium ethylene diamine tetraacetate	3	3	1.5	1.5
tetrapotassium ethylene diamine tetraacetate	No data available	No data available	No data available	No data available
Alkyl aryl phosphate polyether ester, potassium salt	No data available	No data available	No data available	No data available
dipotassium metasilicate	No data available	No data available	No data available	No data available
sodium hydroxide	-	-	1	-

DNEL/DMEL inhalatory exposure - Consumer (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
tetrasodium ethylene diamine tetraacetate	1.2	1.2	0.6	-
tetrapotassium ethylene diamine tetraacetate	No data available	No data available	No data available	No data available
Alkyl aryl phosphate polyether ester, potassium salt	No data available	No data available	No data available	No data available
dipotassium metasilicate	No data available	No data available	No data available	No data available
sodium hydroxide	-	-	1	-

Environmental exposure

Environmental exposure - PNEC

Ingredient(s)	Surface water, fresh (mg/l)	Surface water, marine (mg/l)	Intermittent (mg/l)	Sewage treatment plant (mg/l)
tetrasodium ethylene diamine tetraacetate	2.2	0.22	1.2	43
tetrapotassium ethylene diamine tetraacetate	No data available	No data available	No data available	No data available
Alkyl aryl phosphate polyether ester, potassium salt	No data available	No data available	No data available	No data available
dipotassium metasilicate	No data available	No data available	No data available	No data available
sodium hydroxide	-	-	-	-

Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m³)
tetrasodium ethylene diamine tetraacetate	-	-	0.72	-
tetrapotassium ethylene diamine tetraacetate	No data available	No data available	No data available	No data available
Alkyl aryl phosphate polyether ester, potassium salt	No data available	No data available	No data available	No data available
dipotassium metasilicate	No data available	No data available	No data available	No data available
sodium hydroxide	-	-	-	-

8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet. If available, please refer to the product information sheet for application and handling instructions. Normal use conditions are assumed for this section.

Complex VB13

Recommended safety measures for handling the undiluted product:

- Appropriate engineering controls:** If the product is diluted by using specific dosing systems with no risk of splashes or direct skin contact, the personal protection equipment as described in this section is not required.
- Appropriate organisational controls:** Avoid direct contact and/or splashes where possible. Train personnel.

REACH use scenarios considered for the undiluted product:

	SWED - Sector-specific worker exposure description	LCS	PROC	Duration (min)	ERC
Automatic transfer and dilution	AISE_SWED_IS_8b_1	IS	PROC 8b	60	ERC4
Automatic transfer and dilution	AISE_SWED_PW_8b_1	PW	PROC 8b	60	ERC8b

Personal protective equipment

Eye / face protection:

Safety glasses or goggles (EN 16321 / EN 166). The use of a full-face shield or other full-face protection is strongly recommended when handling open containers or if splashes may occur. Chemical-resistant protective gloves (EN 374). Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier. Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.

Hand protection:

Suggested gloves for prolonged contact: Material: butyl rubber Penetration time: ≥ 480 min Material thickness: ≥ 0.7 mm

Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time: ≥ 30 min Material thickness: ≥ 0.4 mm

In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.

Body protection:

Wear chemical-resistant clothing and boots in case direct dermal exposure and/or splashes may occur (EN 14605).

Respiratory protection:

If exposure to liquid particles or splashes cannot be avoided use: half mask (EN 140) with particle filter P2 (EN 143) or full-face mask (EN 136) with particle filter P1 (EN 143) Consider specific local use conditions. In consultation with the supplier of respiratory protection equipment a different type providing similar protection may be chosen. Specific applications tools may be available to limit exposure. Please refer to the product information sheet for the possibilities. Apply technical measures to comply with the occupational exposure limits, if available.

- Environmental exposure controls:** Should not reach sewage water or drainage ditch undiluted or unneutralised.

Recommended safety measures for handling the diluted product:

Recommended maximum concentration (% w/w): 2

- Appropriate engineering controls:** Provide a good standard of general ventilation.
- Appropriate organisational controls:** No special requirements under normal use conditions.

REACH use scenarios considered for the diluted product:

	SWED	LCS	PROC	Duration (min)	ERC
Automatic application in a dedicated closed system	AISE_SWED_IS_1_1	IS	PROC 1	480	ERC4
Automatic application in a dedicated system	AISE_SWED_IS_4_1	IS	PROC 4	480	ERC8a
Automatic application in a dedicated closed system	AISE_SWED_PW_1_1	PW	PROC 1	480	ERC8a
Spray application	AISE_SWED_PW_11_1	PW	PROC 11	60	ERC8a
Automatic application in a dedicated system	AISE_SWED_PW_4_1	PW	PROC 4	480	ERC8a

Personal protective equipment

Eye / face protection:

No special requirements under normal use conditions.

Hand protection:

No special requirements under normal use conditions.

Body protection:

No special requirements under normal use conditions.

Respiratory protection:

Trigger spray bottle application: No special requirements under normal use conditions. Apply technical measures to comply with the occupational exposure limits, if available.

- Environmental exposure controls:** No special requirements under normal use conditions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Information in this section refers to the product, unless it is specifically stated that substance data is listed

	Method / remark
Physical state: Liquid	
Colour: Clear , Pale , Yellow	
Odour: Product specific	

Complex VB13

Odour threshold: Not applicable**Melting point/freezing point (°C):** Not determined

Not relevant to classification of this product

Initial boiling point and boiling range (°C): Not determined

See substance data

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
tetrasodium ethylene diamine tetraacetate	No data available	Non-experimental data	
tetrapotassium ethylene diamine tetraacetate	No data available		
Alkyl aryl phosphate polyether ester, potassium salt	No data available		
dipotassium metasilicate	No data available		
sodium hydroxide	> 990	Method not given	

Method / remark**Flammability (solid, gas):** Not applicable to liquids**Flammability (liquid):** Not flammable.**Flash point (°C):** > 100 °C

closed cup

Sustained combustion: Not applicable.

(UN Manual of Tests and Criteria, section 32, L.2)

Lower and upper explosion limit/flammability limit (%): Not determined

Substance data, flammability or explosive limits, if available:

Method / remark**Autoignition temperature:** Not determined**Decomposition temperature:** Not applicable.**pH:** >= 11.5 (neat)

ISO 4316

Dilution pH: > 11 (2 %)

ISO 4316

Kinematic viscosity: Not determined**Solubility in / Miscibility with water:** Fully miscible

Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
tetrasodium ethylene diamine tetraacetate	500	Method not given	20
tetrapotassium ethylene diamine tetraacetate	No data available		
Alkyl aryl phosphate polyether ester, potassium salt	No data available		
dipotassium metasilicate	No data available		
sodium hydroxide	1000	Method not given	20

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

Method / remark**Vapour pressure:** Not determined

See substance data

Substance data, vapour pressure

Ingredient(s)	Value (Pa)	Method	Temperature (°C)
tetrasodium ethylene diamine tetraacetate	0.0000000002	Read across	25
tetrapotassium ethylene diamine tetraacetate	No data available		
Alkyl aryl phosphate polyether ester, potassium salt	No data available		
dipotassium metasilicate	No data available		
sodium hydroxide	< 1330	Method not given	20

Method / remark**Relative density:** ≈ 1.32 (20 °C)

OECD 109 (EU A.3)

Relative vapour density: No data available.

Not relevant to classification of this product

Particle characteristics: No data available.

Not applicable to liquids.

9.2 Other information**9.2.1 Information with regard to physical hazard classes****Explosive properties:** Not explosive.**Oxidising properties:** Not oxidising.**Corrosion to metals:** Corrosive**9.2.2 Other safety characteristics****Alkali reserve:** ≈ 4.1 (g NaOH / 100g; pH=10)**SECTION 10: Stability and reactivity****10.1 Reactivity**

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under normal storage and use conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known under normal storage and use conditions.

10.4 Conditions to avoid

None known under normal storage and use conditions.

10.5 Incompatible materials

May be corrosive to metals. Reacts with acids.

10.6 Hazardous decomposition products

None known under normal storage and use conditions.

SECTION 11: Toxicological information

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

Mixture data: .

Relevant calculated ATE(s):

ATE - Oral (mg/kg): >2000

ATE - Inhalatory, mists (mg/l): 4

Substance data, where relevant and available, are listed below:.

Acute toxicity

Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE Oral (mg/kg)
tetrasodium ethylene diamine tetraacetate	LD ₅₀	1780	Rat	OECD 401 (EU B.1)		1780
tetrapotassium ethylene diamine tetraacetate		No data available				Not established
Alkyl aryl phosphate polyether ester, potassium salt	LD ₅₀	> 5000	Rat	Method not given		Not established
dipotassium metasilicate		No data available				Not established
sodium hydroxide		No data available				Not established

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE Dermal (mg/kg)
tetrasodium ethylene diamine tetraacetate	LD ₅₀	> 5000	Rabbit	Method not given		Not established
tetrapotassium ethylene diamine tetraacetate		No data available				Not established
Alkyl aryl phosphate polyether ester, potassium salt		No data available				Not established
dipotassium metasilicate		No data available				Not established
sodium hydroxide	LD ₅₀	1350	Rabbit	Method not given		1350

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
tetrasodium ethylene diamine tetraacetate	LC ₅₀	≥ 1-5 (dust)	Rat	OECD 403 (EU B.2)	6
tetrapotassium ethylene diamine tetraacetate		No data available			
Alkyl aryl phosphate polyether ester, potassium salt		No data available			
dipotassium metasilicate		No data available			
sodium hydroxide		No data available			

Acute inhalative toxicity, continued

Ingredient(s)	ATE - inhalation, dust (mg/l)	ATE - inhalation, mist (mg/l)	ATE - inhalation, vapour (mg/l)	ATE - inhalation, gas (mg/l)
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Complex VB13

tetrasodium ethylene diamine tetraacetate	Not established	Not established	Not established	Not established
tetrapotassium ethylene diamine tetraacetate	Not established	Not established	Not established	Not established
Alkyl aryl phosphate polyether ester, potassium salt	Not established	Not established	Not established	Not established
dipotassium metasilicate	Not established	Not established	Not established	Not established
sodium hydroxide	Not established	Not established	Not established	Not established

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
tetrasodium ethylene diamine tetraacetate	Not irritant	Rabbit	OECD 404 (EU B.4)	
tetrapotassium ethylene diamine tetraacetate	No data available			
Alkyl aryl phosphate polyether ester, potassium salt	Not irritant	Rabbit	OECD 404 (EU B.4)	
dipotassium metasilicate	No data available			
sodium hydroxide	Corrosive	Rabbit	Method not given	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
tetrasodium ethylene diamine tetraacetate	Severe damage		Method not given	
tetrapotassium ethylene diamine tetraacetate	No data available			
Alkyl aryl phosphate polyether ester, potassium salt	Not corrosive or irritant	Rabbit	OECD 405 (EU B.5)	
dipotassium metasilicate	No data available			
sodium hydroxide	Corrosive	Rabbit	Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
tetrasodium ethylene diamine tetraacetate	No data available			
tetrapotassium ethylene diamine tetraacetate	No data available			
Alkyl aryl phosphate polyether ester, potassium salt	No data available			
dipotassium metasilicate	No data available			
sodium hydroxide	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
tetrasodium ethylene diamine tetraacetate	Not sensitising	Guinea pig	OECD 406 (EU B.6) / GPMT	
tetrapotassium ethylene diamine tetraacetate	No data available			
Alkyl aryl phosphate polyether ester, potassium salt	No data available			
dipotassium metasilicate	No data available			
sodium hydroxide	Not sensitising		Human repeated patch test	

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
tetrasodium ethylene diamine tetraacetate	No data available			
tetrapotassium ethylene diamine tetraacetate	No data available			
Alkyl aryl phosphate polyether ester, potassium salt	No data available			
dipotassium metasilicate	No data available			
sodium hydroxide	No data available			

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
tetrasodium ethylene diamine tetraacetate	No evidence for mutagenicity, negative test results	Method not given	No evidence of genotoxicity, negative test results	Method not given
tetrapotassium ethylene diamine tetraacetate	No data available		No data available	
Alkyl aryl phosphate polyether ester, potassium salt	No data available		No data available	
dipotassium metasilicate	No data available		No data available	
sodium hydroxide	No evidence for mutagenicity, negative test results	DNA repair test on rat hepatocytes OECD 473	No evidence for mutagenicity, negative test results	OECD 474 (EU B.12) OECD 475 (EU B.11)

Carcinogenicity

Ingredient(s)	Effect
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Complex VB13

tetrasodium ethylene diamine tetraacetate	No evidence for carcinogenicity, weight-of-evidence
tetrapotassium ethylene diamine tetraacetate	No data available
Alkyl aryl phosphate polyether ester, potassium salt	No data available
dipotassium metasilicate	No data available
sodium hydroxide	No evidence for carcinogenicity, weight-of-evidence

Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
tetrasodium ethylene diamine tetraacetate			No data available				No evidence for reproductive toxicity
tetrapotassium ethylene diamine tetraacetate			No data available				
Alkyl aryl phosphate polyether ester, potassium salt			No data available				
dipotassium metasilicate			No data available				
sodium hydroxide			No data available				No evidence for developmental toxicity No evidence for reproductive toxicity

Repeated dose toxicity

Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
tetrasodium ethylene diamine tetraacetate		No data available				
tetrapotassium ethylene diamine tetraacetate		No data available				
Alkyl aryl phosphate polyether ester, potassium salt		No data available				
dipotassium metasilicate		No data available				
sodium hydroxide		No data available				

Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
tetrasodium ethylene diamine tetraacetate		No data available				
tetrapotassium ethylene diamine tetraacetate		No data available				
Alkyl aryl phosphate polyether ester, potassium salt		No data available				
dipotassium metasilicate		No data available				
sodium hydroxide		No data available				

Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
tetrasodium ethylene diamine tetraacetate		No data available				
tetrapotassium ethylene diamine tetraacetate		No data available				
Alkyl aryl phosphate polyether ester, potassium salt		No data available				
dipotassium metasilicate		No data available				
sodium hydroxide		No data available				

Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
tetrasodium ethylene diamine tetraacetate			No data available					
tetrapotassium ethylene diamine tetraacetate			No data available					
Alkyl aryl phosphate polyether ester, potassium salt			No data available					
dipotassium metasilicate			No data available					

sodium hydroxide			No data available				
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STOT-single exposure

Ingredient(s)	Affected organ(s)
tetrasodium ethylene diamine tetraacetate	No data available
tetrapotassium ethylene diamine tetraacetate	No data available
Alkyl aryl phosphate polyether ester, potassium salt	No data available
dipotassium metasilicate	No data available
sodium hydroxide	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
tetrasodium ethylene diamine tetraacetate	Respiratory tract
tetrapotassium ethylene diamine tetraacetate	No data available
Alkyl aryl phosphate polyether ester, potassium salt	No data available
dipotassium metasilicate	No data available
sodium hydroxide	No data available

Aspiration hazard

Substances with an aspiration hazard (H304), if any, are listed in section 3.

Potential adverse health effects and symptoms

Effects and symptoms related to the product, if any, are listed in subsection 4.2.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Endocrine disrupting properties - Human data, if available:

11.2.2 Other information

No other relevant information available.

SECTION 12: Ecological information

12.1 Toxicity

No data is available on the mixture.

Substance data, where relevant and available, are listed below:

Aquatic short-term toxicity

Aquatic short-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
tetrasodium ethylene diamine tetraacetate	LC ₅₀	> 100	<i>Lepomis macrochirus</i>	OPP 72-1, static (EPA)	96
tetrapotassium ethylene diamine tetraacetate		No data available			
Alkyl aryl phosphate polyether ester, potassium salt	LC ₅₀	> 80	<i>Oncorhynchus mykiss</i>	OECD 203, semi-static	96
dipotassium metasilicate		No data available			
sodium hydroxide	LC ₅₀	35	<i>Various species</i>	Method not given	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
tetrasodium ethylene diamine tetraacetate	EC ₅₀	140	<i>Daphnia magna</i> Straus	DIN 38412, Part 11	48
tetrapotassium ethylene diamine tetraacetate		No data available			
Alkyl aryl phosphate polyether ester, potassium salt		No data available			
dipotassium metasilicate		No data available			
sodium hydroxide	EC ₅₀	40.4	<i>Ceriodaphnia</i> sp.	Method not given	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
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tetrasodium ethylene diamine tetraacetate	EC ₅₀	> 100	<i>Scenedesmus obliquus</i>	88/302/EEC, Part C, static	72
tetrapotassium ethylene diamine tetraacetate		No data available			
Alkyl aryl phosphate polyether ester, potassium salt		No data available			
dipotassium metasilicate		No data available			
sodium hydroxide	EC ₅₀	22	<i>Photobacterium phosphoreum</i>	Method not given	0.25

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
tetrasodium ethylene diamine tetraacetate		No data available			
tetrapotassium ethylene diamine tetraacetate		No data available			
Alkyl aryl phosphate polyether ester, potassium salt		No data available			
dipotassium metasilicate		No data available			
sodium hydroxide		No data available			

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
tetrasodium ethylene diamine tetraacetate	EC ₂₀	> 500	<i>Activated sludge</i>	OECD 209	0.5 hour(s)
tetrapotassium ethylene diamine tetraacetate		No data available			
Alkyl aryl phosphate polyether ester, potassium salt		No data available			
dipotassium metasilicate		No data available			
sodium hydroxide		No data available			

Aquatic long-term toxicity

Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
tetrasodium ethylene diamine tetraacetate	NOEC	> 25.7	<i>Brachydanio rerio</i>	OECD 210	35 day(s)	
tetrapotassium ethylene diamine tetraacetate		No data available				
Alkyl aryl phosphate polyether ester, potassium salt		No data available				
dipotassium metasilicate		No data available				
sodium hydroxide		No data available				

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
tetrasodium ethylene diamine tetraacetate	NOEC	25	<i>Daphnia magna</i>	OECD 211	21 day(s)	
tetrapotassium ethylene diamine tetraacetate		No data available				
Alkyl aryl phosphate polyether ester, potassium salt		No data available				
dipotassium metasilicate		No data available				
sodium hydroxide		No data available				

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw sediment)	Species	Method	Exposure time (days)	Effects observed
tetrasodium ethylene diamine tetraacetate		No data available				
tetrapotassium ethylene diamine tetraacetate		No data available				
Alkyl aryl phosphate polyether ester, potassium salt		No data available				

Complex VB13

		available				
dipotassium metasilicate		No data available				
sodium hydroxide		No data available				

Terrestrial toxicity

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
tetrasodium ethylene diamine tetraacetate	LD ₅₀	156	<i>Eisenia fetida</i>	OECD 207	14	
sodium hydroxide		No data available				

Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
tetrasodium ethylene diamine tetraacetate	NOEC	0.25 - 1.25			21	
sodium hydroxide		No data available				

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
sodium hydroxide		No data available				

Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium hydroxide		No data available				

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
sodium hydroxide		No data available				

12.2 Persistence and degradability**Abiotic degradation**

Abiotic degradation - photodegradation in air, if available:

Ingredient(s)	Half-life time	Method	Evaluation	Remark
tetrasodium ethylene diamine tetraacetate	No data available			
sodium hydroxide	13 second(s)	Method not given	Rapidly photodegradable	

Abiotic degradation - hydrolysis, if available:

Ingredient(s)	Half-life time in fresh water	Method	Evaluation	Remark
tetrasodium ethylene diamine tetraacetate	No data available			
sodium hydroxide	No data available			

Abiotic degradation - other processes, if available:

Ingredient(s)	Type	Half-life time	Method	Evaluation	Remark
tetrasodium ethylene diamine tetraacetate		No data available			
sodium hydroxide		No data available			

Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT ₅₀	Method	Evaluation
tetrasodium ethylene diamine tetraacetate				Weight of evidence	Not readily biodegradable.
tetrapotassium ethylene diamine tetraacetate			> 28 days >60%	Read across	Inherently biodegradable.
Alkyl aryl phosphate polyether ester, potassium salt				ISO 14593	Not readily biodegradable.
dipotassium metasilicate					Not applicable (inorganic substance)
sodium hydroxide					Not applicable (inorganic)

					substance)
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Ready biodegradability - anaerobic and marine conditions, if available:

Ingredient(s)	Medium & Type	Analytical method	DT ₅₀	Method	Evaluation
tetrasodium ethylene diamine tetraacetate					No data available
sodium hydroxide					No data available

Degradation in relevant environmental compartments, if available:

Ingredient(s)	Medium & Type	Analytical method	DT ₅₀	Method	Evaluation
tetrasodium ethylene diamine tetraacetate					No data available
sodium hydroxide					No data available

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log K_{ow})

Ingredient(s)	Value	Method	Evaluation	Remark
tetrasodium ethylene diamine tetraacetate	-3.86	Method not given	No bioaccumulation expected	
tetrapotassium ethylene diamine tetraacetate	No data available			
Alkyl aryl phosphate polyether ester, potassium salt	No data available			
dipotassium metasilicate	No data available			
sodium hydroxide	No data available		Not relevant, does not bioaccumulate	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
tetrasodium ethylene diamine tetraacetate	1.8	<i>Lepomis macrochirus</i>	OECD 305	Low potential for bioaccumulation	
tetrapotassium ethylene diamine tetraacetate	No data available				
Alkyl aryl phosphate polyether ester, potassium salt	No data available				
dipotassium metasilicate	No data available				
sodium hydroxide	No data available				

12.4 Mobility in soil

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log K _{oc}	Desorption coefficient Log K _{oc} (des)	Method	Soil/sediment type	Evaluation
tetrasodium ethylene diamine tetraacetate	No data available				Adsorption to solid soil phase is not expected
tetrapotassium ethylene diamine tetraacetate	No data available				
Alkyl aryl phosphate polyether ester, potassium salt	No data available				
dipotassium metasilicate	No data available				
sodium hydroxide	No data available				Mobile in soil

12.5 Results of PBT and vPvB assessment

Substances that fulfill the criteria for PBT/vPvB, if any, are listed in section 3.

12.6 Endocrine disrupting properties

Endocrine disrupting properties - Environmental effects, if available:

12.7 Other adverse effects

No other adverse effects known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused products:

European Waste Catalogue:

Empty packaging

Recommendation:

Suitable cleaning agents:

The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.
20 01 15* - alkalines.

Dispose of observing national or local regulations.
Water, if necessary with cleaning agent.

SECTION 14: Transport information**Land transport (ADR/RID), Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)****14.1 UN number or ID number:** 1760**14.2 UN proper shipping name:**

Corrosive liquid, n.o.s. (tetrasodium ethylenediaminetetraacetate , dipotassium trioxosilicate)

14.3 Transport hazard class(es):

Transport hazard class (and subsidiary risks): 8

14.4 Packing group: III**14.5 Environmental hazards:**

Environmentally hazardous: No

Marine pollutant: No

14.6 Special precautions for user: None known.**14.7 Maritime transport in bulk according to IMO instruments:** The product is not transported in bulk tankers.**Other relevant information:****ADR**

Classification code: C9

Tunnel restriction code: (E)

Hazard identification number: 80

IMO/IMDG

EmS: F-A, S-B

The product has been classified, labelled and packaged in accordance with the requirements of ADR and the provisions of the IMDG Code. Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations :**

- Regulation (EC) 1907/2006 - REACH (UK amended)
- Regulation (EC) 1272/2008 - CLP (UK amended)
- Regulation (EC) 648/2004 - Detergents regulation (UK amended)
- Delegated Regulation (EU) 2017/2100 and Regulation (EU) 2018/605 (UK amended)
- Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- International Maritime Dangerous Goods (IMDG) Code

Authorisations or restrictions (Regulation (EC) No 1907/2006, Title VII respectively Title VIII): Not applicable.**Ingredients according to Detergents Regulation**

EDTA and salts thereof	15 - 30 %
phosphates, NTA (nitrilotriacetic acid) and salts thereof, phosphonates, non-ionic surfactants	< 5 %

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) 648/2004 on detergents (UK amended). Data to support this assertion are held at the disposal of the competent authorities of the UK and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Comah - classification: Not classified**15.2 Chemical safety assessment**

A chemical safety assessment has not been carried out on the mixture

SECTION 16: Other information

The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract

SDS code: MS1002140**Version:** 04.0**Revision:** 2024-08-01

Reason for revision:

This data sheet contains changes from the previous version in section(s): 2, 1, 3, 4, 8, 9, 11, 12, 15, 16

Classification procedure

The classification of the mixture is in general based on calculation methods using substance data, as required by Regulation (EC) No 1272/2008. If for certain classifications data on the mixture is available or for example bridging principles or weight of evidence can be used for classification, this will be indicated in the relevant sections of the Safety Data Sheet. See section 9 for physical chemical properties, section 11 for toxicological information and section 12 for ecological information.

Abbreviations and acronyms:

- AISE - The international Association for Soaps, Detergents and Maintenance Products
- ATE - Acute Toxicity Estimate
- DNEL - Derived No Effect Limit
- EC50 - effective concentration, 50%
- ERC - Environmental release categories
- EUH - CLP Specific hazard statement
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- LCS - Life cycle stage
- LD50 - Lethal Dose, 50% / Median Lethal dose
- NOAEL - No observed adverse effect level
- NOEL - No observed effect level
- OECD - Organisation for Economic Cooperation and Development
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- PROC - Process categories
- REACH number - REACH registration number, without supplier specific part
- vPvB - very Persistent and very Bioaccumulative
- H290 - May be corrosive to metals.
- H302 - Harmful if swallowed.
- H314 - Causes severe skin burns and eye damage.
- H315 - Causes skin irritation.
- H318 - Causes serious eye damage.
- H319 - Causes serious eye irritation.
- H332 - Harmful if inhaled.
- H335 - May cause respiratory irritation.
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H412 - Harmful to aquatic life with long lasting effects.

End of Safety Data Sheet