Safety Data Sheet

SUMA BREAK UP

Revision: 2019-02-13 **Version:** 01.0

SECTION 1: Identification of the substance/mixture and supplier

1.1 Product identifier
Product name: SUMA BREAK UP

1.2 Recommended use and restrictions on use
Identified uses:
Degreaser
Restrictions of use:
Uses other than those identified are not recommended

1.3 Details of the supplier
DIVERSEY NEW ZEALAND LTD.
24 Bancroft Crescent, Glendene, Auckland, 0602, New Zealand
Telephone: +64 9 813 9800; 0800 803 615 (toll free)
Fax: + 64 9 813 9801
Website: www.diversey.com

1.4 Emergency telephone number
Seek medical advice (show the label or safety data sheet where possible)
Call 0800 243 622 (24 hrs)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

HSNO Classification
6.3A - Irritating to the skin
8.3A - Corrosive to ocular tissue
9.3C - Harmful to terrestrial vertebrates

GHS Equivalent Classification
Skin irritation, Category 2
Serious eye damage, Category 1
Terrestrial vertebrates, Category 3

2.2 Label elements

Signal word: Danger

Hazard statements:
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H433 - Harmful to terrestrial vertebrates.

Prevention statement(s):
P233 - Keep container tightly closed.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P280 - Wear protective gloves, protective clothing and eye or face protection.

Response statement(s):
P332 + P313 - If skin irritation occurs: Get medical advice or attention.
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.
P321 - Specific treatment (see supplemental first aid instructions on this label).

P362 - Take off contaminated clothing.

Disposal statement(s):
P501 - Dispose of unused content as chemical waste.

2.3 Other hazards
No other hazards known.

2.4 Classification diluted product:
Recommended maximum concentration (%): 2.5

HSNO Classification
Not classified as hazardous

Not classified as hazardous

SECTION 3: Composition/information on ingredients

3.1 Substances / Mixtures

Ingredient(s)	CAS number	EC number	Weight percent
disodium metasilicate	6834-92-0	229-912-9	3-10
sodium xylene sulphonate	1300-72-7	215-090-9	3-10
potassium carbonate	584-08-7	209-529-3	3-10
2-butoxyethanol	111-76-2	203-905-0	1-3
tetrapotassium pyrophosphate	7320-34-5	230-785-7	1-3
sodium hydroxide	1310-73-2	215-185-5	0.01-0.1

[4] Polymer.
Non-hazardous ingredients are the remainder and add up to 100%.

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

SECTION 4: First aid measures

4.1 Description of first aid measures

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. If skin irritation occurs: Get medical advice or attention.

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. Get medical attention or advice if you feel unwell.

Self-protection of first aider: Consider personal protective equipment as indicated in subsection 8.2.

First aid facilities: Eyewash facilities should be considered in a workplace where necessary.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: No known effects or symptoms in normal use.

Skin contact: Causes irritation.

Eye contact: Causes severe or permanent damage.

Ingestion: No known effects or symptoms in normal use.

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.

Poison Information Center: Call 0800 764 766 (0800 POISON)

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.

5.4 Hazchem code
None allocated

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear suitable protective clothing, gloves and eye/face protection.

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

6.3 Methods and material for containment and cleaning up
Absorb with liquid-binding material (sand, diatomite, universal binders, sawdust).

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 adviced by Diversey. Wash face, hands and any exposed skin thoroughly after handling. Take off contaminated clothing. Wash contaminated clothing before reuse. Avoid contact with 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)	Long term value(s)	Short term value(s)	Ceiling value(s)
2-butoxyethanol	25 ppm 121 mg/m³		
sodium hydroxide			2 mg/m³

Biological limit values, if available:

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.

Recommended safety measures for handling the undiluted product:
Covering activities such as filling and transfer of product to application equipment, flasks or buckets

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.

Personal protective equipment
Eye / face protection: Safety glasses or goggles (EN 166).
Hand protection: 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.
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:	No special requirements under normal use conditions.
Environmental exposure controls:	No special requirements under normal use conditions.

Recommended safety measures for handling the diluted product:

Recommended maximum concentration (%): 2.5

Appropriate engineering controls:	No special requirements under normal use conditions.
Appropriate organisational controls:	No special requirements under normal use conditions.

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:	No special requirements under normal use conditions.
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

	Method / remark
Physical State: Liquid	
Colour: Clear, Pale Yellow	
Odour: Product specific	
Odour threshold: Not applicable	
pH: ≈ 13.3 (neat)	ISO 4316
Melting point/freezing point (°C): Not determined	Not relevant to classification of this product
Initial boiling point and boiling range (°C): Not determined	
Flammability (liquid): Not flammable.	
Flash point (°C): Not applicable.	
Sustained combustion: Not applicable.	
(UN Manual of Tests and Criteria, section 32, L.2)	
Evaporation rate: Not determined	Not relevant to classification of this product
Flammability (solid, gas): Not applicable to liquids	
Upper/lower flammability limit (%): Not determined	
Vapour pressure: Not determined	
Vapour density: Not determined	Not relevant to classification of this product
Relative density: ≈ 1.11 (20 °C)	OECD 109 (EU A.3)
Solubility in / Miscibility with Water: Fully miscible	
Partition coefficient: n-octanol/water No information available.	
Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3	
Autoignition temperature: Not determined	
Decomposition temperature: Not applicable.	
Viscosity: Not determined	
Explosive properties: Not explosive.	
Oxidising properties: Not oxidising	

9.2 Other information
Surface tension (N/m): Not determined
Corrosion to metals: Not corrosive

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
Reacts with acids.

10.6 Hazardous decomposition products
None known under normal storage and use conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture data:.

Relevant calculated ATE(s):
ATE - Oral (mg/kg): >5000
ATE - Dermal (mg/kg): >5000
ATE - Inhalatory, mists (mg/l): >20
ATE - Inhalatory, vapours (mg/l): 390

Skin irritation and corrosivity
Result: Skin irritant 2 **Method:** Alkali or acid reserve

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)
disodium metasilicate	LD_{50}	770 - 820	Mouse	Method not given	
sodium xylene sulphonate	LD_{50}	> 7200	Rat	OECD 401 (EU B.1)	
potassium carbonate	LD_{50}	> 2000	Rat	Method not given	
2-butoxyethanol	LD_{50}	1746	Rat	Method not given	
tetrapotassium pyrophosphate	LD_{50}	> 2000	Rat	Method not given	
sodium hydroxide		No data available			

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
disodium metasilicate		No data available			
sodium xylene sulphonate	LD_{50}	> 2000	Rabbit	EPA OPPTS 870.1200	
potassium carbonate	LD_{50}	> 2000	Rabbit	Method not given	
2-butoxyethanol	LD_{50}	6411		Method not given	
tetrapotassium pyrophosphate	LD_{50}	> 2000	Rabbit	Method not given	
sodium hydroxide	LD_{50}	1350	Rabbit	Method not given	

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
disodium metasilicate		No data available			
sodium xylene sulphonate	LC_{0}	> 6.41 (mist)	Rat	Method not given	4
potassium carbonate	LC_{50}	No mortality observed		EPA OPP 81-3	
2-butoxyethanol	LC_{50}	> 2 (mist) No mortality observed	Rat	Method not given	4
tetrapotassium pyrophosphate	LC_{50}	> 1.1	Rat	Method not given	4
sodium hydroxide		No data available			

Irritation and corrosivity
Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
disodium metasilicate	Corrosive		Method not given	
sodium xylene sulphonate	Mild irritant	Rabbit	OECD 404 (EU B.4)	
potassium carbonate	Irritant		Weight of evidence	
2-butoxyethanol	Irritant	Rabbit	OECD 404 (EU B.4)	24; 48; 72 hour(s)
tetrapotassium pyrophosphate	Not irritant		Method not given	
sodium hydroxide	Corrosive	Rabbit	Method not given	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
disodium metasilicate	Corrosive		Method not given	
sodium xylene sulphonate	Irritant	Rabbit	OECD 405 (EU B.5)	
potassium carbonate	Irritant	Rabbit	OECD 405 (EU B.5)	
2-butoxyethanol	Irritant	Rabbit	OECD 405 (EU B.5)	24; 48; 72 hour(s)
tetrapotassium pyrophosphate	Irritant		Method not given	
sodium hydroxide	Corrosive	Rabbit	Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
disodium metasilicate	No data available			
sodium xylene sulphonate	No data available			
potassium carbonate	No data available			
2-butoxyethanol	No data available			
tetrapotassium pyrophosphate	No data available			
sodium hydroxide	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
disodium metasilicate	No data available			
sodium xylene sulphonate	Not sensitising	Guinea pig	OECD 406 (EU B.6) / GPMT	
potassium carbonate	Not sensitising	Guinea pig	Method not given	
2-butoxyethanol	Not sensitising	Guinea pig	OECD 406 (EU B.6) / GPMT	
tetrapotassium pyrophosphate	Not sensitising		Method not given	
sodium hydroxide	Not sensitising		Human repeated patch test	

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
disodium metasilicate	No data available			
sodium xylene sulphonate	No data available			
potassium carbonate	No data available			
2-butoxyethanol	No data available			
tetrapotassium pyrophosphate	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)
disodium metasilicate	No data available		No data available	
sodium xylene sulphonate	No evidence for mutagenicity, negative test results	OECD 473	No evidence for mutagenicity, negative test results	OECD 474 (EU B.12)
potassium carbonate	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13) OECD 473	No data available	
2-butoxyethanol	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13) OECD 476 (Chinese Hamster Ovary)	No evidence for mutagenicity, negative test results	OECD 474 (EU B.12)
tetrapotassium pyrophosphate	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
disodium metasilicate	No data available
sodium xylene sulphonate	No evidence for carcinogenicity, negative test results
potassium carbonate	No data available
2-butoxyethanol	No evidence for carcinogenicity, negative test results
tetrapotassium pyrophosphate	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
disodium metasilicate			No data				

			available				
sodium xylene sulphonate	NOAEL	Teratogenic effects	> 936	Rat	Non guideline test		
potassium carbonate	NOAEL	Teratogenic effects	180	Rat	Not known		
2-butoxyethanol			No data available				
tetrapotassium pyrophosphate			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
disodium metasilicate	NOAEL	> 227 - 237	Rat	Method not given		
sodium xylene sulphonate	NOAEL	763 - 3534	Rat	OECD 408 (EU B.26)	90	
potassium carbonate	NOAEL	6054	Rat	Method not given	28	
2-butoxyethanol		No data available				
tetrapotassium pyrophosphate	NOAEL	No data available	Rat	OECD 408 (EU B.26)	90 days	
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
disodium metasilicate		No data available				
sodium xylene sulphonate	NOAEL	> 440		OECD 411 (EU B.28)	90	
potassium carbonate		No data available				
2-butoxyethanol		No data available				
tetrapotassium pyrophosphate		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
disodium metasilicate		No data available				
sodium xylene sulphonate		No data available				
potassium carbonate	NOAEL	0.06	Rat	Read across	21	
2-butoxyethanol		No data available				
tetrapotassium pyrophosphate		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
disodium metasilicate			No data available					
sodium xylene sulphonate	Oral		No data available	Rat	OECD 453 (EU B.33)	24 month(s)	No adverse effects observed	
potassium carbonate	Oral	NOAEL	2667	Rat	Read across	32 month(s)		
2-butoxyethanol			No data available					
tetrapotassium pyrophosphate			No data available					
sodium hydroxide			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
disodium metasilicate	No data available
sodium xylene sulphonate	No data available

potassium carbonate	No data available
2-butoxyethanol	No data available
tetrapotassium pyrophosphate	No data available
sodium hydroxide	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
disodium metasilicate	No data available
sodium xylene sulphonate	No data available
potassium carbonate	No data available
2-butoxyethanol	No data available
tetrapotassium pyrophosphate	No data available
sodium hydroxide	No data available

Aspiration hazard
Substances with an aspiration hazard (H304), if any, are listed in section 3. If relevant, see section 9 for dynamic viscosity and relative density of the product.

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

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)
disodium metasilicate	LC_{50}	210	*Brachydanio rerio*	Method not given	96
sodium xylene sulphonate	LC_{50}	> 1000	*Fish*	EPA-OPPTS 850.1075	96
potassium carbonate	LC_{50}	68	*Oncorhynchus mykiss*	Method not given	96
2-butoxyethanol	LC_{50}	> 100	*Oncorhynchus mykiss*	OECD 203, static	96
tetrapotassium pyrophosphate	LC_{50}	> 100	*Oncorhynchus mykiss*	OECD 203 (EU C.1)	96
sodium hydroxide	LC_{50}	35	*Various species*	Method not given	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
disodium metasilicate	EC_{50}	1700	*Daphnia*	Method not given	48
sodium xylene sulphonate	EC_{50}	> 1000	*Daphnia*	EPA-OPPTS 850.1010	48
potassium carbonate	EC_{50}	200	*Daphnia pulex*	Method not given	48
2-butoxyethanol	EC_{50}	> 100	*Daphnia magna Straus*	OECD 202, static	48
tetrapotassium pyrophosphate	EC_{50}	> 100	*Daphnia magna Straus*	OECD 202 (EU C.2)	48
sodium hydroxide	EC_{50}	40.4	*Ceriodaphnia sp.*	Method not given	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
disodium metasilicate	EC_{50}	207	*Chlorella pyrenoidosa*	Method not given	72
sodium xylene sulphonate	EC_{50}	> 230	*Not specified*	EPA OPPTS 850.5400	96
potassium carbonate		No data available			-
2-butoxyethanol	EC_{50}	> 100	*Pseudokirchneriella subcapitata*	OECD 201, static	72
tetrapotassium pyrophosphate		No data available			-
sodium hydroxide	EC_{50}	22	*Photobacterium phosphoreum*	Method not given	0.25

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
disodium metasilicate		No data available			-
sodium xylene sulphonate		No data available			-
potassium carbonate		No data available			-
2-butoxyethanol		No data available			-
tetrapotassium pyrophosphate		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
disodium metasilicate	EC_{50}	> 100	*Activated sludge*	Method not given	3 hour(s)
sodium xylene sulphonate	$E_r C_{50}$	> 1000	*Activated sludge*	OECD 209	3 hour(s)
potassium carbonate		No data available			
2-butoxyethanol	EC_0	700	*Pseudomonas putida*	Method not given	16 hour(s)
tetrapotassium pyrophosphate		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
disodium metasilicate		No data available				
sodium xylene sulphonate		No data available				
potassium carbonate		No data available				
2-butoxyethanol	NOEC	> 100	*Danio rerio*	OECD 204	21 day(s)	
tetrapotassium pyrophosphate		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
disodium metasilicate		No data available				
sodium xylene sulphonate		No data available				
potassium carbonate		No data available				
2-butoxyethanol	NOEC	100	*Daphnia magna*	OECD 211	21 day(s)	
tetrapotassium pyrophosphate		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
disodium metasilicate		No data available			-	
sodium xylene sulphonate		No data available			-	
potassium carbonate		No data available			-	
2-butoxyethanol		No data available			-	
tetrapotassium pyrophosphate		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
disodium metasilicate		No data available			-	
sodium xylene sulphonate		No data available			-	
potassium carbonate		No data available			-	
2-butoxyethanol		No data available			-	
tetrapotassium pyrophosphate		No data available			-	
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
disodium metasilicate		No data available			-	
sodium xylene sulphonate		No data available			-	
potassium carbonate		No data available			-	
2-butoxyethanol		No data available			-	
tetrapotassium pyrophosphate		No data available			-	
sodium hydroxide		No data available			-	

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
disodium metasilicate		No data available			-	
sodium xylene sulphonate		No data available			-	
potassium carbonate		No data available			-	
2-butoxyethanol		No data available			-	
tetrapotassium pyrophosphate		No data available			-	
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
disodium metasilicate		No data available			-	
sodium xylene sulphonate		No data available			-	
potassium carbonate		No data available			-	
2-butoxyethanol		No data available			-	
tetrapotassium pyrophosphate		No data available			-	
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
disodium metasilicate		No data available			-	
sodium xylene sulphonate		No data available			-	
potassium carbonate		No data available			-	
2-butoxyethanol		No data available			-	
tetrapotassium pyrophosphate		No data available			-	
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
sodium hydroxide	13 second(s)	Method not given	Rapidly photodegradable	

Abiotic degradation - hydrolysis, if available:

Abiotic degradation - other processes, if available:

Biodegradation
Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT_{50}	Method	Evaluation
disodium metasilicate					Not applicable (inorganic substance)
sodium xylene sulphonate			99.8 % in 28 day(s)	OECD 301F	Readily biodegradable
potassium carbonate					Not applicable (inorganic substance)
2-butoxyethanol		CO_2 production	90.4 % in 28 day(s)	OECD 301B	Readily biodegradable
tetrapotassium pyrophosphate					Not applicable (inorganic substance)
sodium hydroxide					Not applicable (inorganic substance)

Ready biodegradability - anaerobic and marine conditions, if available:

Degradation in relevant environmental compartments, if available:

12.3 Bioaccumulative potential
Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
disodium metasilicate	No data available			
sodium xylene sulphonate	-3.12	Method not given	No bioaccumulation expected	
potassium carbonate	No data available		No bioaccumulation expected	
2-butoxyethanol	0.81	OECD 107	Low potential for bioaccumulation	
tetrapotassium pyrophosphate	-2	Method not given	No bioaccumulation expected	
sodium hydroxide	No data available		Not relevant, does not bioaccumulate	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
disodium metasilicate	No data available				
sodium xylene sulphonate	No data available				
potassium carbonate	No data available				
2-butoxyethanol	No data available				
tetrapotassium pyrophosphate	No data available				
sodium hydroxide	No data available				

12.4 Mobility in soil
Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log Koc	Desorption coefficient Log Koc(des)	Method	Soil/sediment type	Evaluation
disodium metasilicate	No data available				
sodium xylene sulphonate	No data available				
potassium carbonate	No data available				Potential for mobility in soil, soluble in water
2-butoxyethanol	No data available				Potential for mobility in soil, soluble in water
tetrapotassium pyrophosphate	No data available				
sodium hydroxide	No data available				Mobile in soil

12.5 Other adverse effects
No other adverse effects known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused products:	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.
Empty packaging Recommendation:	Dispose of observing national or local regulations.
Suitable cleaning agents:	Water, if necessary with cleaning agent.

SECTION 14: Transport information

ADG, IMO/IMDG, ICAO/IATA

14.1 UN number: Non-dangerous goods
14.2 UN proper shipping name: Non-dangerous goods
14.3 Transport hazard class(es): Non-dangerous goods
14.4 Packing group: Non-dangerous goods
14.5 Environmental hazards: Non-dangerous goods
14.6 Special precautions for user: Non-dangerous goods
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: Non-dangerous goods

Other relevant information:
Hazchem code: None allocated

SECTION 15: Regulatory information

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

HSNO Approval Number	HSR002530.
Group standard	Cleaning Products (Subsidiary Hazard) Group Standard 2017
Inventory Listing(s)	New Zealand: NZIoC (New Zealand Inventory of Chemicals) All components are listed on the NZIoC inventory, or are exempt

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: MS32000538 **Version:** 01.0 **Revision:** 2019-02-13

Exposure standards - Time Weighted Average (TWA) or Workplace Exposure Standard (WES) (NZ): Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

Abbreviations and acronyms:
- DNEL - Derived No Effect Limit
- AUH - GHS Specific hazard statement
- PNEC - Predicted No Effect Concentration
- ATE - Acute Toxicity Estimate
- LD50 - Lethal Dose, 50% / Median Lethal dose
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- EC50 - effective concentration, 50%
- NOEL - No observed effect level
- NOAEL - No observed adverse effect level
- STOT-RE - Specific target organ toxicity (repeated exposure)
- STOT-SE - Specific target organ toxicity (single exposure)
- EC No. - European Community Number
- OECD - Organization for Economic Cooperation and Development

End of Safety Data Sheet