



PINNACLE

Revision: 2018-08-19

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SECTION 1: Identification of the substance/mixture and supplier**1.1 Product identifier**

Product name: PINNACLE

1.2 Recommended use and restrictions on use**Identified uses:**

Floor finish

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

Call 0800 243 622 (24 hrs)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****HSNO Classification**

6.3B - Mildly irritating to the skin

9.1D - Slightly harmful to the aquatic environment or are otherwise designed for biocidal action

GHS Equivalent Classification

Skin irritation, Category 3

Acute aquatic toxicity, Category 3

2.2 Label elements**Hazard statements:**

H316 - Causes mild skin irritation.

H402 - Harmful to aquatic life.

2.3 Other hazards

No other hazards known.

SECTION 3: Composition/information on ingredients**3.1 Substances / Mixtures**

Ingredient(s)	CAS number	EC number	Weight percent
(2-methoxymethylethoxy)propanol	34590-94-8	252-104-2	3-10
2-(2-ethoxyethoxy)ethanol	111-90-0	203-919-7	3-10
tris(2-butoxyethyl) phosphate	78-51-3	201-122-9	1-3
oxydiethylene dibenzoate	120-55-8	204-407-6	1-3
Carbonic acid, ammonium zinc salt (2:2:1)	40861-29-8	255-118-7	0.1-1
alkyl alcohol ethoxylate	68131-39-5	Polymer*	0.1-1
Alcohols, C12-15, ethoxylated	68131-39-5	Polymer*	0.1-1
ammonia	1336-21-6	215-647-6	0.1-1
zinc oxide	1314-13-2	215-222-5	0.1-1

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

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4.1 Description of first aid measures

Inhalation:	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:	Rinse cautiously with water for several minutes. If irritation occurs and persists, get medical attention.
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.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation:	No known effects or symptoms in normal use.
Skin contact:	No known effects or symptoms in normal use.
Eye contact:	No known effects or symptoms in normal use.
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**

No special measures required.

6.2 Environmental precautions

Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground/soil. Dilute with plenty of water. Inform responsible authorities in case undiluted product reaches drainage system, surface or ground water or the ground/soil.

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 advised by Diversey. Wash hands before breaks and at the end of workday. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Use personal protective equipment as required. 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-methoxymethylethoxy)propanol	100 ppm 606 mg/m ³	150 ppm 909 mg/m ³	
zinc oxide	10 mg/m ³ 3 mg/m ³	10 mg/m ³	

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:

Appropriate engineering controls: No special requirements under normal use conditions.
Appropriate organisational controls: Avoid direct contact and/or splashes where possible. Train personnel.

Personal protective equipment

Eye / face protection: Safety glasses are not normally required. However, their use is recommended in those cases where splashes may occur when handling the product (EN 166).

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

Physical State: Liquid

Colour: Opaque, White

Odour: Product specific

Odour threshold: Not applicable

pH: ≈ 9 (neat)

Melting point/freezing point (°C): Not determined

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

Flash point (°C): Not applicable.

Sustained combustion: Not applicable.

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

Evaporation rate: Not determined

Flammability (solid, gas): Not applicable to liquids

Upper/lower flammability limit (%): Not determined

Vapour pressure: Not determined

Vapour density: Not determined

Relative density: ≈ 1.03 (20 °C)

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

Method / remark

ISO 4316

Not relevant to classification of this product

Not relevant to classification of this product

Not relevant to classification of this product
OECD 109 (EU A.3)

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

None known under normal use conditions.

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

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)
(2-methoxymethylethoxy)propanol	LD ₅₀	> 4000	Rat	Method not given	
2-(2-ethoxyethoxy)ethanol	LD ₅₀	5540	Rat	Method not given	
tris(2-butoxyethyl) phosphate	LD ₅₀	> 2000	Rat	Method not given	
oxydiethylene dibenzoate		No data available			
Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
alkyl alcohol ethoxylate		No data available			
Alcohols, C12-15, ethoxylated		No data available			
ammonia	LD ₅₀	350	Rat	Method not given	
zinc oxide	LD ₅₀	> 5000	Rat	Method not given	

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
(2-methoxymethylethoxy)propanol	LD ₅₀	9510	Rabbit	Method not given	
2-(2-ethoxyethoxy)ethanol	LD ₅₀	5940	Rat	Method not given	
tris(2-butoxyethyl) phosphate	LD ₅₀	> 5000	Rat	Method not given	
oxydiethylene dibenzoate		No data available			
Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
alkyl alcohol ethoxylate		No data available			
Alcohols, C12-15, ethoxylated		No data available			
ammonia		No data available			
zinc oxide		No data available			

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
(2-methoxymethylethoxy)propanol	LC ₀	> 1.667 (vapour) No mortality observed	Rat		7
2-(2-ethoxyethoxy)ethanol	LC ₀	> 5.24 (mist)	Rat	OECD 403 (EU B.2)	8

tris(2-butoxyethyl) phosphate oxydiethylene dibenzoate	LC ₀	> 6.4 (mist)	Rat	OECD 403 (EU B.2)	4
Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
alkyl alcohol ethoxylate		No data available			
Alcohols, C12-15, ethoxylated		No data available			
ammonia	LC ₅₀	7.035	Rat	Method not given	0.5
zinc oxide		No data available			

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
(2-methoxymethylethoxy)propanol	Not irritant		Method not given	
2-(2-ethoxyethoxy)ethanol	No data available			
tris(2-butoxyethyl) phosphate	Not irritant	Rabbit	Method not given	
oxydiethylene dibenzoate	No data available			
Carbonic acid, ammonium zinc salt (2:2:1)	No data available			
alkyl alcohol ethoxylate	No data available			
Alcohols, C12-15, ethoxylated	No data available			
ammonia	Corrosive		Method not given	
zinc oxide	No data available			

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
(2-methoxymethylethoxy)propanol	Not corrosive or irritant		Method not given	
2-(2-ethoxyethoxy)ethanol	No data available			
tris(2-butoxyethyl) phosphate	Not corrosive or irritant	Rabbit	Method not given	
oxydiethylene dibenzoate	No data available			
Carbonic acid, ammonium zinc salt (2:2:1)	No data available			
alkyl alcohol ethoxylate	No data available			
Alcohols, C12-15, ethoxylated	No data available			
ammonia	Severe damage		Method not given	
zinc oxide	No data available			

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
(2-methoxymethylethoxy)propanol	No data available			
2-(2-ethoxyethoxy)ethanol	No data available			
tris(2-butoxyethyl) phosphate	No data available			
oxydiethylene dibenzoate	No data available			
Carbonic acid, ammonium zinc salt (2:2:1)	No data available			
alkyl alcohol ethoxylate	No data available			
Alcohols, C12-15, ethoxylated	No data available			
ammonia	Irritating to respiratory tract		Method not given	
zinc oxide	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
(2-methoxymethylethoxy)propanol	Not sensitising		Method not given	
2-(2-ethoxyethoxy)ethanol	Not sensitising		Method not given	
tris(2-butoxyethyl) phosphate	Not sensitising	Guinea pig	OECD 406 (EU B.6) / Buehler test	
oxydiethylene dibenzoate	No data available			
Carbonic acid, ammonium zinc salt (2:2:1)	No data available			
alkyl alcohol ethoxylate	No data available			
Alcohols, C12-15, ethoxylated	No data available			
ammonia	Not sensitising		Method not given	
zinc oxide	No data available			

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
(2-methoxymethylethoxy)propanol	No data available			

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2-(2-ethoxyethoxy)ethanol	No data available			
tris(2-butoxyethyl) phosphate	No data available			
oxydiethylene dibenzoate	No data available			
Carbonic acid, ammonium zinc salt (2:2:1)	No data available			
alkyl alcohol ethoxylate	No data available			
Alcohols, C12-15, ethoxylated	No data available			
ammonia	No data available			
zinc oxide	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)
(2-methoxymethylethoxy)propanol	No evidence for mutagenicity, negative test results	Method not given	No data available	
2-(2-ethoxyethoxy)ethanol	No data available		No data available	
tris(2-butoxyethyl) phosphate	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13) OECD 476 (Chinese Hamster Ovary) OECD 476 (HGPR)	No evidence for mutagenicity, negative test results	OECD 474 (EU B.12)
oxydiethylene dibenzoate	No data available		No data available	
Carbonic acid, ammonium zinc salt (2:2:1)	No data available		No data available	
alkyl alcohol ethoxylate	No data available		No data available	
Alcohols, C12-15, ethoxylated	No data available		No data available	
ammonia	No evidence for mutagenicity		No evidence for mutagenicity	
zinc oxide	No data available		No data available	

Carcinogenicity

Ingredient(s)	Effect
(2-methoxymethylethoxy)propanol	No evidence for carcinogenicity, negative test results
2-(2-ethoxyethoxy)ethanol	No data available
tris(2-butoxyethyl) phosphate	No data available
oxydiethylene dibenzoate	No data available
Carbonic acid, ammonium zinc salt (2:2:1)	No data available
alkyl alcohol ethoxylate	No data available
Alcohols, C12-15, ethoxylated	No data available
ammonia	No data available
zinc oxide	No data available

Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
(2-methoxymethylethoxy)propanol			No data available				No evidence for reproductive toxicity
2-(2-ethoxyethoxy)ethanol			No data available				
tris(2-butoxyethyl) phosphate			No data available		Not known		No evidence for reproductive toxicity
oxydiethylene dibenzoate			No data available				
Carbonic acid, ammonium zinc salt (2:2:1)			No data available				
alkyl alcohol ethoxylate			No data available				
Alcohols, C12-15, ethoxylated			No data available				
ammonia			No data available				No evidence for reproductive toxicity
zinc oxide			No data available				

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
(2-methoxymethylethoxy)propanol		No data available				
2-(2-ethoxyethoxy)ethanol		No data available				
tris(2-butoxyethyl) phosphate	NOAEL	20	Rat	Method not given	non-standard	
oxydiethylene dibenzoate		No data available				

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Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
alkyl alcohol ethoxylate		No data available			
Alcohols, C12-15, ethoxylated		No data available			
ammonia	NOAEL	68		Method not given	
zinc oxide		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
(2-methoxymethylethoxy)propanol		No data available				
2-(2-ethoxyethoxy)ethanol		No data available				
tris(2-butoxyethyl) phosphate	NOAEL	1000	Rabbit	Method not given	21	
oxydiethylene dibenzoate		No data available				
Carbonic acid, ammonium zinc salt (2:2:1)		No data available				
alkyl alcohol ethoxylate		No data available				
Alcohols, C12-15, ethoxylated		No data available				
ammonia		No data available				
zinc oxide		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
(2-methoxymethylethoxy)propanol		No data available				
2-(2-ethoxyethoxy)ethanol		No data available				
tris(2-butoxyethyl) phosphate		No data available				
oxydiethylene dibenzoate		No data available				
Carbonic acid, ammonium zinc salt (2:2:1)		No data available				
alkyl alcohol ethoxylate		No data available				
Alcohols, C12-15, ethoxylated		No data available				
ammonia		No data available				
zinc oxide		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
(2-methoxymethylethoxy)propanol			No data available					
2-(2-ethoxyethoxy)ethanol			No data available					
tris(2-butoxyethyl) phosphate			No data available					
oxydiethylene dibenzoate			No data available					
Carbonic acid, ammonium zinc salt (2:2:1)			No data available					
alkyl alcohol ethoxylate			No data available					
Alcohols, C12-15, ethoxylated			No data available					
ammonia			No data available					
zinc oxide			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
(2-methoxymethylethoxy)propanol	No data available
2-(2-ethoxyethoxy)ethanol	No data available

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tris(2-butoxyethyl) phosphate	Not applicable
oxydiethylene dibenzoate	No data available
Carbonic acid, ammonium zinc salt (2:2:1)	No data available
alkyl alcohol ethoxylate	No data available
Alcohols, C12-15, ethoxylated	No data available
ammonia	No data available
zinc oxide	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
(2-methoxymethylethoxy)propanol	No data available
2-(2-ethoxyethoxy)ethanol	No data available
tris(2-butoxyethyl) phosphate	Not applicable
oxydiethylene dibenzoate	No data available
Carbonic acid, ammonium zinc salt (2:2:1)	No data available
alkyl alcohol ethoxylate	No data available
Alcohols, C12-15, ethoxylated	No data available
ammonia	No data available
zinc oxide	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)
(2-methoxymethylethoxy)propanol	LC ₅₀	> 1000	<i>Poecilia reticulata</i>	Method not given	96
2-(2-ethoxyethoxy)ethanol	LC ₅₀	> 100	<i>Pimephales promelas</i>	Method not given	96
tris(2-butoxyethyl) phosphate	LC ₅₀	24	<i>Oncorhynchus mykiss</i> Various species	Method not given	96
oxydiethylene dibenzoate		No data available			
Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
alkyl alcohol ethoxylate		No data available			
Alcohols, C12-15, ethoxylated		No data available			
ammonia	LC ₅₀	0.56 - 2.48	<i>Fish</i>	Method not given	96
zinc oxide	LC ₅₀	1.1	<i>Oncorhynchus mykiss</i>	Method not given	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
(2-methoxymethylethoxy)propanol	EC ₅₀	1919	<i>Daphnia magna</i> Straus	Method not given	48
2-(2-ethoxyethoxy)ethanol	EC ₅₀	1982	<i>Daphnia magna</i> Straus	Method not given	48
tris(2-butoxyethyl) phosphate	EC ₅₀	53	<i>Daphnia magna</i> Straus	Method not given	48
oxydiethylene dibenzoate		No data available			
Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
alkyl alcohol ethoxylate		No data available			
Alcohols, C12-15, ethoxylated		No data available			

ammonia	EC ₅₀	1.1 - 22.8	<i>Daphnia magna Straus</i>	Method not given	-
zinc oxide		No data available			-

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
(2-methoxymethylethoxy)propanol	EC ₅₀	> 969	<i>Selenastrum capricornutum</i>	Method not given	72
2-(2-ethoxyethoxy)ethanol		No data available			-
tris(2-butoxyethyl) phosphate	EC ₅₀	61	<i>Pseudokirchneriella subspicitata</i>	Method not given	48
oxydiethylene dibenzoate		No data available			
Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
alkyl alcohol ethoxylate		No data available			
Alcohols, C12-15, ethoxylated		No data available			
ammonia		No data available			-
zinc oxide	EC ₅₀	0.17	<i>Desmodesmus subspicatus</i>	Method not given	72

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
(2-methoxymethylethoxy)propanol		No data available			-
2-(2-ethoxyethoxy)ethanol		No data available			-
tris(2-butoxyethyl) phosphate		No data available			-
oxydiethylene dibenzoate		No data available			
Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
alkyl alcohol ethoxylate		No data available			
Alcohols, C12-15, ethoxylated		No data available			
ammonia		No data available			-
zinc oxide		No data available			-

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
(2-methoxymethylethoxy)propanol	EC ₁₀	4168	<i>Pseudomonas putida</i>	Method not given	
2-(2-ethoxyethoxy)ethanol	EC ₅₀	> 5000		Method not given	16 hour(s)
tris(2-butoxyethyl) phosphate	EC ₅₀	> 1000	<i>Activated sludge</i>	Method not given	3 hour(s)
oxydiethylene dibenzoate		No data available			
Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
alkyl alcohol ethoxylate		No data available			
Alcohols, C12-15, ethoxylated		No data available			
ammonia		No data available			
zinc oxide		No data available			

Aquatic long-term toxicity

Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
(2-methoxymethylethoxy)propanol		No data available				
2-(2-ethoxyethoxy)ethanol		No data available				
tris(2-butoxyethyl) phosphate		No data available				
oxydiethylene dibenzoate		No data available				

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		available				
Carbonic acid, ammonium zinc salt (2:2:1)		No data available				
alkyl alcohol ethoxylate		No data available				
Alcohols, C12-15, ethoxylated		No data available				
ammonia		No data available				
zinc oxide		No data available				

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
(2-methoxymethylethoxy)propanol	NOEC	> 0.5	<i>Daphnia magna</i>	Method not given	22 day(s)	
2-(2-ethoxyethoxy)ethanol		No data available				
tris(2-butoxyethyl) phosphate		No data available				
oxydiethylene dibenzoate		No data available				
Carbonic acid, ammonium zinc salt (2:2:1)		No data available				
alkyl alcohol ethoxylate		No data available				
Alcohols, C12-15, ethoxylated		No data available				
ammonia		No data available				
zinc oxide	NOEC	0.4	<i>Daphnia magna</i>	Method not given	48 hour(s)	

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
(2-methoxymethylethoxy)propanol		No data available			-	
2-(2-ethoxyethoxy)ethanol		No data available			-	
tris(2-butoxyethyl) phosphate		No data available			-	
oxydiethylene dibenzoate		No data available				
Carbonic acid, ammonium zinc salt (2:2:1)		No data available				
alkyl alcohol ethoxylate		No data available				
Alcohols, C12-15, ethoxylated		No data available				
ammonia		No data available			-	
zinc oxide		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
(2-methoxymethylethoxy)propanol		No data available			-	
2-(2-ethoxyethoxy)ethanol		No data available			-	
tris(2-butoxyethyl) phosphate		No data available			-	
ammonia		No data available			-	
zinc oxide		No data available			-	

Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
(2-methoxymethylethoxy)propanol		No data available			-	
2-(2-ethoxyethoxy)ethanol		No data available			-	
tris(2-butoxyethyl) phosphate		No data available			-	

		available				
ammonia		No data available			-	
zinc oxide		No data available			-	

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
(2-methoxymethylethoxy)propanol		No data available			-	
2-(2-ethoxyethoxy)ethanol		No data available			-	
tris(2-butoxyethyl) phosphate		No data available			-	
ammonia		No data available			-	
zinc oxide		No data available			-	

Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
(2-methoxymethylethoxy)propanol		No data available			-	
2-(2-ethoxyethoxy)ethanol		No data available			-	
tris(2-butoxyethyl) phosphate		No data available			-	
ammonia		No data available			-	
zinc oxide		No data available			-	

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
(2-methoxymethylethoxy)propanol		No data available			-	
2-(2-ethoxyethoxy)ethanol		No data available			-	
tris(2-butoxyethyl) phosphate		No data available			-	
ammonia		No data available			-	
zinc oxide		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
(2-methoxymethylethoxy)propanol	< 1 day(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
(2-methoxymethylethoxy)propanol		Oxygen depletion	75 % in 28 day(s)	OECD 301F	Readily biodegradable
2-(2-ethoxyethoxy)ethanol			90 % in 28 day(s)	OECD 301E	Readily biodegradable
tris(2-butoxyethyl) phosphate			87 % in 28 day(s)	OECD 301B	Readily biodegradable
oxydiethylene dibenzoate				OECD 301A	Readily biodegradable
Carbonic acid, ammonium zinc salt (2:2:1)					Not applicable (inorganic substance)
alkyl alcohol ethoxylate				OECD 301B	Readily biodegradable
Alcohols, C12-15, ethoxylated				OECD 301B	Readily biodegradable
ammonia					Not applicable (inorganic substance)
zinc oxide					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
(2-methoxymethylethoxy)propanol	1.01	Method not given	Low potential for bioaccumulation	
2-(2-ethoxyethoxy)ethanol	-0.8	Method not given	No bioaccumulation expected	
tris(2-butoxyethyl) phosphate	3.75	Method not given	No bioaccumulation expected	
oxydiethylene dibenzoate	No data available			
Carbonic acid, ammonium zinc salt (2:2:1)	No data available			
alkyl alcohol ethoxylate	No data available			
Alcohols, C12-15, ethoxylated	No data available			
ammonia	0.23	Method not given	No bioaccumulation expected	
zinc oxide	No data available			

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
(2-methoxymethylethoxy)propanol	No data available				
2-(2-ethoxyethoxy)ethanol	No data available				
tris(2-butoxyethyl) phosphate	5.8		Method not given	No bioaccumulation expected	
oxydiethylene dibenzoate	No data available				
Carbonic acid, ammonium zinc salt (2:2:1)	No data available				
alkyl alcohol ethoxylate	No data available				
Alcohols, C12-15, ethoxylated	No data available				
ammonia	No data available				
zinc oxide	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
(2-methoxymethylethoxy)propanol	No data available				High potential for mobility in soil
2-(2-ethoxyethoxy)ethanol	No data available				High potential for mobility in soil
tris(2-butoxyethyl) phosphate	2.5		Method not given		Mobile in soil
oxydiethylene dibenzoate	No data available				
Carbonic acid, ammonium zinc salt (2:2:1)	No data available				
alkyl alcohol ethoxylate	No data available				
Alcohols, C12-15, ethoxylated	No data available				
ammonia	No data available				Low mobility in soil
zinc oxide	No data available				

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

Land transport, Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)

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

PINNACLE

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

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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