Vectra

Revision: 2024-10-22 **Version:** 01.0

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

1.1 Product identifier
Trade name: Vectra

1.2 Recommended use and restrictions on use
See product label.
For professional and industrial use only.

1.3 Details of the supplier of the safety data sheet
SOLENIS VIETNAM COMPANY LIMITED

Contact details
Level 4&5, M-Building, Lot C7B-02A, Block A, No.9 Street 8, Zone Saigon South New Urban Area, Tan Phu Ward, District 7, Ho Chi Minh City, VIETNAM
Tel. 0314996293

1.4 Emergency telephone number
In case of medical emergency, please seek professional medical advice.

SECTION 2: Composition/information on ingredients

2.1 Substances / Mixtures

Ingredient(s)	CAS number	EC number	Classification	Weight percent
2-(2-ethoxyethoxy)ethanol	111-90-0	203-919-7	Acute toxicity - Oral, Category 5 (H303)	3-10
Carbonic acid, ammonium zinc salt (2:2:1)	40861-29-8	255-118-7	Skin corrosion, Category 1B (H314) Acute toxicity - Oral, Category 4 (H302) Specific target organ toxicity - Single exposure, Category 3 (H335) Chronic aquatic toxicity, Category 2 (H411) Serious eye damage, Category 1 (H318)	1-3
1-phenoxypropan-2-ol	770-35-4	212-222-7	Eye irritation, Category 2A (H319)	1-3
tris(2-butoxyethyl) phosphate	78-51-3	201-122-9		1-3
alkyl alcohol ethoxylate	68131-39-5	[4]	Acute toxicity - Oral, Category 4 (H302) Serious eye damage, Category 1 (H318) Acute aquatic toxicity, Category 1 M=1 (H400) Chronic aquatic toxicity, Category 2 (H411)	0.1-1
ammonia	1336-21-6	215-647-6	Skin corrosion, Category 1B (H314) Specific target organ toxicity - Single exposure, Category 3 (H335) Acute aquatic toxicity, Category 1 M=1 (H400) Chronic aquatic toxicity, Category 2 (H411) Serious eye damage, Category 1 (H318)	0.1-1

Workplace exposure limit(s), if available, are listed in subsection 8.1.
ATE, if available, are listed in section 11.

SECTION 3: Hazards identification

3.1 Classification of the substance or mixture
Skin irritation, Category 2
Eye irritation, Category 2A
Acute aquatic toxicity, Category 3

3.2 Label elements

Signal word: Warning.

Hazard statements:
H315 + H319 - Causes skin and serious eye irritation.
H402 - Harmful to aquatic life.

3.3 Other hazards
No other hazards known. Exposure and appropriate engineering controls are specified in subsection 8.2 exposure controls.

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation:	Get medical attention or advice if you feel unwell.
Skin contact:	Take off immediately all contaminated clothing and wash it before reuse.
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. If eye irritation persists: Get medical advice or 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:	Causes irritation.
Eye contact:	Causes severe irritation.
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.

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
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).

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.

Advice 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)
ammonia	17 mg/m³	25 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:

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 16321 / 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: 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: Opaque , Off-white White	
Odour: Ammonia	
Odour threshold: Not applicable	
pH: ≈ 8.6 (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): > 93 °C	closed cup
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	
Lower and upper explosion limit/flammability limit (%): Not determined	
Vapour pressure: Not determined	

Relative density: ≈ 1.03 (20 °C) OECD 109 (EU A.3)
Relative vapour density: Not determined. Not relevant to classification of this product
Particle characteristics: No data available. Not applicable to liquids.
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.
Kinematic viscosity: ≈ 2 mPa.s (20 °C)
Explosive properties: Not explosive.
Oxidising properties: Not oxidising.

9.2 Other information
Surface tension (N/m): Not determined
Corrosion to metals: Not corrosive
0.09 %P

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-(2-ethoxyethoxy)ethanol	LD_{50}	5540	Rat	Method not given	
Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
1-phenoxypropan-2-ol	LD_{50}	> 2000	Rat	Method not given	
tris(2-butoxyethyl) phosphate	LD_{50}	> 2000	Rat	Method not given	
alkyl alcohol ethoxylate		No data available			
ammonia	LD_{50}	350	Rat	Method not given	

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
2-(2-ethoxyethoxy)ethanol	LD_{50}	5940	Rat	Method not given	

Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
1-phenoxypropan-2-ol	LD_{50}	> 2000	Rat	Method not given	
tris(2-butoxyethyl) phosphate	LD_{50}	> 5000	Rat	Method not given	
alkyl alcohol ethoxylate		No data available			
ammonia		No data available			

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
2-(2-ethoxyethoxy)ethanol	LC_0	> 5.24 (mist)	Rat	OECD 403 (EU B.2)	8
Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
1-phenoxypropan-2-ol	LC_0	5.4 (mist)	Rat	Method not given	4
tris(2-butoxyethyl) phosphate	LC_0	> 6.4 (mist)	Rat	OECD 403 (EU B.2)	4
alkyl alcohol ethoxylate		No data available			
ammonia	LC_{50}	7.035	Rat	Method not given	0.5

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
2-(2-ethoxyethoxy)ethanol	No data available			
Carbonic acid, ammonium zinc salt (2:2:1)	No data available			
1-phenoxypropan-2-ol	No data available			
tris(2-butoxyethyl) phosphate	Not irritant	Rabbit	Method not given	
alkyl alcohol ethoxylate	No data available			
ammonia	Corrosive		Method not given	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
2-(2-ethoxyethoxy)ethanol	No data available			
Carbonic acid, ammonium zinc salt (2:2:1)	No data available			
1-phenoxypropan-2-ol	Irritant		Method not given	
tris(2-butoxyethyl) phosphate	Not corrosive or irritant	Rabbit	Method not given	
alkyl alcohol ethoxylate	No data available			
ammonia	Severe damage		Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
2-(2-ethoxyethoxy)ethanol	No data available			
Carbonic acid, ammonium zinc salt (2:2:1)	No data available			
1-phenoxypropan-2-ol	No data available			
tris(2-butoxyethyl) phosphate	No data available			
alkyl alcohol ethoxylate	No data available			
ammonia	Irritating to respiratory tract		Method not given	

Sensitisation

Sensitisation by skin contact

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

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
2-(2-ethoxyethoxy)ethanol	No data available			
Carbonic acid, ammonium zinc salt (2:2:1)	No data available			
1-phenoxypropan-2-ol	No data available			

tris(2-butoxyethyl) phosphate	No data available			
alkyl alcohol ethoxylate	No data available			
ammonia	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-(2-ethoxyethoxy)ethanol	No data available		No data available	
Carbonic acid, ammonium zinc salt (2:2:1)	No data available		No data available	
1-phenoxypropan-2-ol	No evidence of genotoxicity, negative test results	Method not given	No evidence of genotoxicity, negative test results	Method not given
tris(2-butoxyethyl) phosphate	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13) OECD 476 (Chinese Hamster Ovary) OECD 476 (HGPRT)	No evidence for mutagenicity, negative test results	OECD 474 (EU B.12)
alkyl alcohol ethoxylate	No data available		No data available	
ammonia	No evidence for mutagenicity		No evidence for mutagenicity	

Carcinogenicity

Ingredient(s)	Effect
2-(2-ethoxyethoxy)ethanol	No data available
Carbonic acid, ammonium zinc salt (2:2:1)	No data available
1-phenoxypropan-2-ol	No data available
tris(2-butoxyethyl) phosphate	No data available
alkyl alcohol ethoxylate	No data available
ammonia	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-(2-ethoxyethoxy)ethanol			No data available				
Carbonic acid, ammonium zinc salt (2:2:1)			No data available				
1-phenoxypropan-2-ol			No data available				No evidence for reproductive toxicity
tris(2-butoxyethyl) phosphate			No data available		Not known		No evidence for reproductive toxicity
alkyl alcohol ethoxylate			No data available				
ammonia			No data available				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
2-(2-ethoxyethoxy)ethanol		No data available				
Carbonic acid, ammonium zinc salt (2:2:1)		No data available				
1-phenoxypropan-2-ol		No data available				
tris(2-butoxyethyl) phosphate	NOAEL	20	Rat	Method not given	non-standard	
alkyl alcohol ethoxylate		No data available				
ammonia	NOAEL	68		Method not given		

Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
2-(2-ethoxyethoxy)ethanol		No data available				
Carbonic acid, ammonium zinc salt (2:2:1)		No data available				
1-phenoxypropan-2-ol		No data available				
tris(2-butoxyethyl) phosphate	NOAEL	1000	Rabbit	Method not given	21	

alkyl alcohol ethoxylate		No data available				
ammonia		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-(2-ethoxyethoxy)ethanol		No data available				
Carbonic acid, ammonium zinc salt (2:2:1)		No data available				
1-phenoxypropan-2-ol		No data available				
tris(2-butoxyethyl) phosphate		No data available				
alkyl alcohol ethoxylate		No data available				
ammonia		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-(2-ethoxyethoxy)ethanol			No data available					
Carbonic acid, ammonium zinc salt (2:2:1)			No data available					
1-phenoxypropan-2-ol			No data available					
tris(2-butoxyethyl) phosphate			No data available					
alkyl alcohol ethoxylate			No data available					
ammonia			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
2-(2-ethoxyethoxy)ethanol	No data available
Carbonic acid, ammonium zinc salt (2:2:1)	No data available
1-phenoxypropan-2-ol	No data available
tris(2-butoxyethyl) phosphate	Not applicable
alkyl alcohol ethoxylate	No data available
ammonia	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
2-(2-ethoxyethoxy)ethanol	No data available
Carbonic acid, ammonium zinc salt (2:2:1)	No data available
1-phenoxypropan-2-ol	No data available
tris(2-butoxyethyl) phosphate	Not applicable
alkyl alcohol ethoxylate	No data available
ammonia	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-(2-ethoxyethoxy)ethanol	LC_{50}	> 100	*Pimephales promelas*	Method not given	96
Carbonic acid, ammonium zinc salt (2:2:1)	LC_{50}	No data available			
1-phenoxypropan-2-ol	LC_{50}	280	*Pimephales promelas*	Method not given	96
tris(2-butoxyethyl) phosphate	LC_{50}	24	*Oncorhynchus mykiss Various species*	Method not given	96
alkyl alcohol ethoxylate	LC_{50}	No data available			
ammonia	LC_{50}	0.56 - 2.48	*Fish*	Method not given	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
2-(2-ethoxyethoxy)ethanol	EC_{50}	1982	*Daphnia magna Straus*	Method not given	48
Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
1-phenoxypropan-2-ol	LC_{50}	370	*Daphnia magna Straus*	Method not given	48
tris(2-butoxyethyl) phosphate	EC_{50}	53	*Daphnia magna Straus*	Method not given	48
alkyl alcohol ethoxylate		No data available			
ammonia	EC_{50}	1.1 - 22.8	*Daphnia magna Straus*	Method not given	

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
2-(2-ethoxyethoxy)ethanol	EC_{50}	14861	*Pseudokirchneriella subcapitata*	Method not given	72
Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
1-phenoxypropan-2-ol	EC_{50}	> 100	*Desmodesmus subspicatus*	Method not given	72
tris(2-butoxyethyl) phosphate	EC_{50}	61	*Pseudokirchneriella subspicatata*	Method not given	48
alkyl alcohol ethoxylate		No data available			
ammonia		No data available			

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
2-(2-ethoxyethoxy)ethanol		No data available			
Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
1-phenoxypropan-2-ol		No data available			
tris(2-butoxyethyl) phosphate		No data available			
alkyl alcohol ethoxylate		No data available			
ammonia		No data available			

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
2-(2-ethoxyethoxy)ethanol	EC_{50}	> 5000		Method not given	16 hour(s)
Carbonic acid, ammonium zinc salt (2:2:1)		No data available			
1-phenoxypropan-2-ol		No data available			
tris(2-butoxyethyl) phosphate	EC_{50}	> 1000	*Activated sludge*	Method not given	3 hour(s)
alkyl alcohol ethoxylate		No data available			

ammonia		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-(2-ethoxyethoxy)ethanol		No data available				
Carbonic acid, ammonium zinc salt (2:2:1)		No data available				
1-phenoxypropan-2-ol		No data available				
tris(2-butoxyethyl) phosphate		No data available				
alkyl alcohol ethoxylate		No data available				
ammonia		No data available				

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
2-(2-ethoxyethoxy)ethanol		No data available				
Carbonic acid, ammonium zinc salt (2:2:1)		No data available				
1-phenoxypropan-2-ol		No data available				
tris(2-butoxyethyl) phosphate		No data available				
alkyl alcohol ethoxylate		No data available				
ammonia		No data available				

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

Terrestrial toxicity

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

Terrestrial toxicity - plants, if available:

Terrestrial toxicity - birds, if available:

Terrestrial toxicity - beneficial insects, if available:

Terrestrial toxicity - soil bacteria, if available:

12.2 Persistence and degradability

Abiotic degradation

Abiotic degradation - photodegradation in air, if available:

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-(2-ethoxyethoxy)ethanol			90 % in 28 day(s)	OECD 301E	Readily biodegradable
Carbonic acid, ammonium zinc salt (2:2:1)					Not applicable (inorganic substance)
1-phenoxypropan-2-ol	Activated sludge, aerobe		72% in 28 day(s)	OECD 301F	Readily biodegradable
tris(2-butoxyethyl) phosphate			87 % in 28 day(s)	OECD 301B	Readily biodegradable
alkyl alcohol ethoxylate				OECD 301B	Readily biodegradable
ammonia					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-(2-ethoxyethoxy)ethanol	-0.8	Method not given	No bioaccumulation expected	
Carbonic acid, ammonium zinc salt (2:2:1)	No data available			
1-phenoxypropan-2-ol	1.41	Method not given	Low potential for bioaccumulation	
tris(2-butoxyethyl) phosphate	3.75	Method not given	No bioaccumulation expected	
alkyl alcohol ethoxylate	No data available			
ammonia	0.23	Method not given	No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
2-(2-ethoxyethoxy)ethanol	No data available				
Carbonic acid, ammonium zinc salt (2:2:1)	No data available				
1-phenoxypropan-2-ol	No data available				
tris(2-butoxyethyl) phosphate	5.8		Method not given	No bioaccumulation expected	
alkyl alcohol ethoxylate	No data available				
ammonia	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-(2-ethoxyethoxy)ethanol	No data available				High potential for mobility in soil
Carbonic acid, ammonium zinc salt (2:2:1)	No data available				
1-phenoxypropan-2-ol	No data available				High potential for mobility in soil
tris(2-butoxyethyl) phosphate	2.5		Method not given		Mobile in soil
alkyl alcohol ethoxylate	No data available				
ammonia	No data available				Low mobillity 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

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
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

SECTION 15: Regulatory information

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

National regulations
• Decree 108/2008/NP-CP Circular No.: 04/2012/TT-BCT Regulations on the Classification and Labeling of Chemicals

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: MS4800018 **Version:** 01.0 **Revision:** 2024-10-22

Abbreviations and acronyms:
• DNEL - Derived No Effect Limit
• 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)
• OECD - Organisation for Economic Cooperation and Development
• H302 - Harmful if swallowed.
• H303 - May be harmful if swallowed.
• H314 - Causes severe skin burns and eye damage.
• H318 - Causes serious eye damage.
• H319 - Causes serious eye irritation.
• H335 - May cause respiratory irritation.
• H400 - Very toxic to aquatic life.
• H402 - Harmful to aquatic life.
• H411 - Toxic to aquatic life with long lasting effects.

End of Safety Data Sheet