



REVEAL J-FILL

Revision: 2018-07-04

Version: 01.1

SECTION 1: Identification of the substance/mixture and supplier

1.1 Product identifier

Product name: REVEAL J-FILL

1.2 Recommended use and restrictions on use

Identified uses:

Floor cleaner

Hard surface cleaner

Restrictions of use:

Uses other than those identified are not recommended

1.3 Details of the supplier

Diversey Australia Pty. Limited

29 Chifley St, Smithfield, NSW, 2164, Australia

Telephone: 1800 647 779 (toll free)

Fax: (02) 9725 5767

Email: aucustserv@diverse.com

Website: www.diverse.com/

1.4 Emergency telephone number

Call 1800 033 111 (24hrs)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Skin corrosion, Category 1B

Specific target organ toxicity (single exposure), Category 3

2.2 Label elements



Signal word: Danger

Hazard statements:

H314 - Causes severe skin burns and eye damage.

H335 - May cause respiratory irritation.

Prevention statement(s):

P260 - Do not breathe vapours.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear protective gloves, protective clothing and eye or face protection.

Response statement(s):

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

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).

P363 - Wash contaminated clothing before reuse.

P370 + P378 - In case of fire: Use chemical powder to extinguish.

Storage statement(s):

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up.

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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 (%): 0.39

Not classified as hazardous

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

Ingredient(s)	CAS number	EC number	Weight percent
2-butoxyethanol	111-76-2	203-905-0	10-30
2-aminoethanol	141-43-5	205-483-3	10-30
alkyl alcohol ethoxylate	68439-50-9	Polymer*	3-10
ammonia	1336-21-6	215-647-6	3-10

Non-hazardous ingredients are the remainder and add up to 100%.

* Polymer.

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

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.

Inhalation:

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

Skin contact:

Take off immediately all contaminated clothing and wash it before re-use. 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.

First aid facilities:

Shower and eyewash facilities should be considered in a workplace where necessary.

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

May cause respiratory irritation.

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.

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 13 11 26 (Australia Wide).

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.

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5.4 Hazchem code

- 2X
 2 - Fine water spray.
 X - Liquid-tight chemical protective clothing and breathing apparatus. Contain.

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

Turn off all sources of ignition. Ventilate the area. Ensure adequate ventilation. Do not breathe dust or vapour. 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

Use neutralising agent. Absorb with liquid-binding material (sand, diatomite, universal binders, sawdust). Ensure adequate ventilation.

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:**

Keep away from flames and hot surfaces. No smoking. Keep away from heat. Take precautionary measures against static discharges.

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. Wash contaminated clothing before reuse. Use personal protective equipment as required. Avoid contact with skin and eyes. Do not breathe vapours. 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 well-ventilated place. Store in a closed container. Keep only in original packaging. Keep cool. Keep away from heat and direct sunlight.

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) (TWA)	Short term value(s) (STEL)	Peak value(s)
2-butoxyethanol	20 ppm 96.9 mg/m ³	50 ppm 242 mg/m ³	
2-aminoethanol	3 ppm 7.5 mg/m ³	6 ppm 15 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:

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

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Eye / face protection:	Safety glasses or goggles (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.
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:	Respiratory protection is not normally required. However, inhalation of vapour, spray, gas or aerosols should be avoided.
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 (%): 0.39

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, Dark Green	
Odour: Product specific	
Odour threshold: Not applicable	
pH: > 12 (neat)	ISO 4316
Dilution pH: ≈ 11 (0.4%)	ISO 4316
Melting point/freezing point (°C): Not determined	Not relevant to classification of this product
Initial boiling point and boiling range (°C): 100	
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: ≈ 1.01 (20 °C)	OECD 109 (EU A.3)
Solubility in / Miscibility with Water: soluble 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	Not relevant to classification of this product
Explosive properties: Not explosive. Vapours may form explosive mixtures with air.	
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.

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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): >2000

ATE - Dermal (mg/kg): >2000

ATE - Inhalatory, vapours (mg/l): >20

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-butoxyethanol	LD ₅₀	1746	Rat	Method not given	
2-aminoethanol	LD ₅₀	1515	Rat	OECD 401 (EU B.1)	
alkyl alcohol ethoxylate	LD ₅₀	> 300 - 2000	Rat	Read across	
ammonia	LD ₅₀	350	Rat	Method not given	

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
2-butoxyethanol	LD ₅₀	6411		Method not given	
2-aminoethanol	LD ₅₀	1025	Rabbit	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-butoxyethanol	LC ₅₀	> 2 (mist) No mortality observed	Rat	Method not given	4
2-aminoethanol		No mortality observed	Rat	Non guideline test	6
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-butoxyethanol	Irritant	Rabbit	OECD 404 (EU B.4)	24; 48; 72 hour(s)
2-aminoethanol	Corrosive	Rabbit	OECD 404 (EU B.4)	
alkyl alcohol ethoxylate	Not irritant		Read across	
ammonia	Corrosive		Method not given	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
2-butoxyethanol	Irritant	Rabbit	OECD 405 (EU B.5)	24; 48; 72 hour(s)
2-aminoethanol	Severe damage	Rabbit	OECD 405 (EU B.5)	

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alkyl alcohol ethoxylate	Severe damage	Rabbit	Read across	
ammonia	Severe damage		Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
2-butoxyethanol	No data available			
2-aminoethanol	Irritating to respiratory tract		Method not given	
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-butoxyethanol	Not sensitising	Guinea pig	OECD 406 (EU B.6) / GPMT	
2-aminoethanol	Not sensitising	Guinea pig	OECD 406 (EU B.6) / GPMT	
alkyl alcohol ethoxylate	No data available			
ammonia	Not sensitising		Method not given	

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
2-butoxyethanol	No data available			
2-aminoethanol	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-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)
2-aminoethanol	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13) OECD 473 OECD 476 (Mouse lymphoma)	No evidence for mutagenicity, negative test results	OECD 474 (EU B.12)
alkyl alcohol ethoxylate	No evidence for mutagenicity, negative test results	Read across	No data available	
ammonia	No evidence for mutagenicity		No evidence for mutagenicity	

Carcinogenicity

Ingredient(s)	Effect
2-butoxyethanol	No evidence for carcinogenicity, negative test results
2-aminoethanol	No evidence for carcinogenicity, weight-of-evidence
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-butoxyethanol			No data available				
2-aminoethanol	NOAEL	Developmental toxicity	> 75	Rabbit	OECD 414 (EU B.31), oral	6 - 15 day(s)	No evidence for developmental toxicity 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-butoxyethanol		No data available				
2-aminoethanol	NOAEL	300	Rat		75	
alkyl alcohol ethoxylate		No data available				
ammonia	NOAEL	68		Method not		

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				given		
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Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
2-butoxyethanol		No data available				
2-aminoethanol		No data available				
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-butoxyethanol		No data available				
2-aminoethanol		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-butoxyethanol			No data available					
2-aminoethanol			No data available					
alkyl alcohol ethoxylate			No data available					
ammonia			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
2-butoxyethanol	No data available
2-aminoethanol	No data available
alkyl alcohol ethoxylate	No data available
ammonia	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
2-butoxyethanol	No data available
2-aminoethanol	No data available
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-butoxyethanol	LC ₅₀	> 100	<i>Oncorhynchus mykiss</i>	OECD 203, static	96
2-aminoethanol	LC ₅₀	349	<i>Cyprinus carpio</i>	OECD 203 (EU C.1)	96
alkyl alcohol ethoxylate	LC ₅₀	1 - 10	<i>Brachydanio rerio</i>	Read across	96
ammonia	LC ₅₀	0.56 - 2.48	<i>Fish</i>	Method not given	96

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Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
2-butoxyethanol	EC ₅₀	> 100	<i>Daphnia magna Straus</i>	OECD 202, static	48
2-aminoethanol	EC ₅₀	65	<i>Daphnia magna Straus</i>	OECD 202, static	48
alkyl alcohol ethoxylate	EC ₅₀	1 - 10	<i>Not specified</i>	Method not given	48
ammonia	EC ₅₀	1.1 - 22.8	<i>Daphnia magna Straus</i>	Method not given	-

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
2-butoxyethanol	EC ₅₀	> 100	<i>Pseudokirchneriella subcapitata</i>	OECD 201, static	72
2-aminoethanol	NOEC	1	<i>Pseudokirchneriella subcapitata</i>	OECD 201 (EU C.3)	72
alkyl alcohol ethoxylate	EC ₅₀	1 - 10	<i>Not specified</i>	DIN 38412, Part 9 OECD 201 (EU C.3)	-
ammonia		No data available			-

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
2-butoxyethanol		No data available			-
2-aminoethanol		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-butoxyethanol	EC ₀	700	<i>Pseudomonas putida</i>	Method not given	16 hour(s)
2-aminoethanol	EC ₅₀	> 1000	<i>Activated sludge</i>	DIN EN ISO 8192-OECD 209-88/302/EEC	3 hour(s)
alkyl alcohol ethoxylate		> 1000	<i>Activated sludge</i>	DEV-L2	
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-butoxyethanol	NOEC	> 100	<i>Danio rerio</i>	OECD 204	21 day(s)	
2-aminoethanol	NOEC	1.2	<i>Oryzias latipes</i>	OECD 210	30 day(s)	
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-butoxyethanol	NOEC	100	<i>Daphnia magna</i>	OECD 211	21 day(s)	
2-aminoethanol	NOEC	0.85	<i>Daphnia magna</i>	OECD 211	21 day(s)	
alkyl alcohol ethoxylate		No data available				
ammonia		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
2-butoxyethanol		No data available			-	
2-aminoethanol		No data			-	

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		available				
alkyl alcohol ethoxylate		No data available			-	
ammonia		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-butoxyethanol		No data available			-	
2-aminoethanol		No data available			-	
alkyl alcohol ethoxylate		No data available			-	
ammonia		No data available			-	

Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
2-butoxyethanol		No data available			-	
2-aminoethanol		No data available			-	
alkyl alcohol ethoxylate		No data available			-	
ammonia		No data available			-	

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
2-butoxyethanol		No data available			-	
2-aminoethanol		No data available			-	
alkyl alcohol ethoxylate		No data available			-	
ammonia		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-butoxyethanol		No data available			-	
2-aminoethanol		No data available			-	
alkyl alcohol ethoxylate		No data available			-	
ammonia		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-butoxyethanol		No data available			-	
2-aminoethanol		No data available			-	
alkyl alcohol ethoxylate		No data available			-	
ammonia		No data 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

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Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT ₅₀	Method	Evaluation
2-butoxyethanol		CO ₂ production	90.4 % in 28 day(s)	OECD 301B	Readily biodegradable
2-aminoethanol		DOC reduction	> 90 % in 21 day(s)	OECD 301A	Readily biodegradable
alkyl alcohol ethoxylate		CO ₂ production	> 60 % in 28 day(s)	Method not given	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 K_{ow})

Ingredient(s)	Value	Method	Evaluation	Remark
2-butoxyethanol	0.81	OECD 107	Low potential for bioaccumulation	
2-aminoethanol	- 1.91	OECD 107	No bioaccumulation expected	
alkyl alcohol ethoxylate	No data available		No bioaccumulation expected	
ammonia	0.23	Method not given	No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
2-butoxyethanol	No data available				
2-aminoethanol	No data available				
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 K _{oc}	Desorption coefficient Log K _{oc} (des)	Method	Soil/sediment type	Evaluation
2-butoxyethanol	No data available				Potential for mobility in soil, soluble in water
2-aminoethanol	0.067		Model calculation		Potential for mobility in soil, soluble in water Adsorption to solid soil phase is not expected
alkyl alcohol ethoxylate	No data available				Potential for adsorption to soil
ammonia	No data available				Low mobility 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

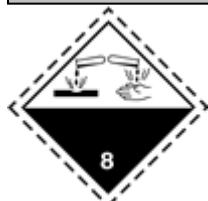
Recommendation:

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: 2491

14.2 UN proper shipping name:

Ethanolamine

14.3 Transport hazard class(es):

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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 Transport in bulk according to Annex II of MARPOL and the IBC Code: The product is not transported in bulk tankers.

Other relevant information:

Hazchem code: 2X

The product has been classified, labelled and packaged in accordance with the requirements of ADG 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	Globally Harmonised System of Classification and Labelling of Chemicals (GHS) as published by Safework Australia.
Poison schedule	Classified as a Schedule 6 (S6) Poison using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
Classification	Globally Harmonised System of Classification and Labelling of Chemicals (GHS) as published by Safework Australia.
Inventory listing(s)	AICS (Australian Inventory of Chemical Substances): All components are listed on AICS, 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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Additional information:

Respirators: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

Work practices - solvents: Organic solvents may present both a health and flammability hazard. It is recommended that engineering controls should be adopted to reduce exposure where practicable (for example, if using indoors, ensure explosion proof extraction ventilation is available). Flammable or combustible liquids with explosive limits have the potential for ignition from static discharge. Refer to AS 1020 (The control of undesirable static electricity) and AS 1940 (The storage and handling of flammable and combustible liquids) for control procedures.

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).

Personal protective equipment guidelines: The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

Health effects from exposure: It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a Safety Data Sheet which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

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