



## VIREX II

Revision: 2020-05-03

Version: 01.1

### SECTION 1: Identification of the substance/mixture and supplier

#### 1.1 Product identifier

Product name: VIREX II

#### 1.2 Recommended use and restrictions on use

##### Identified uses:

Hospital Grade disinfectant, cleaner, and deodorant

##### 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@diversey.com  
Website: www.diversey.com/

#### 1.4 Emergency telephone number

Seek medical advice (show the label or safety data sheet where possible)  
Call 1800 033 111 (24hrs)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Flammable liquids, Category 4  
Skin corrosion, Category 1C  
Serious eye damage, Category 1  
Acute toxicity, oral, Category 4

#### 2.2 Label elements



Signal word: Danger

#### Hazard statements:

H227 - Combustible liquid.  
H314 - Causes severe skin burns and eye damage.  
H302 - Harmful if swallowed.

#### Prevention statement(s):

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 - Keep container tightly closed.  
P234 - Keep only in original packaging.  
P264 - Wash face, hands and any exposed skin thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
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.  
P301 + P312 - IF SWALLOWED: Call a POISON CENTRE, doctor or physician if you feel unwell.  
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).

## VIREX II

P330 - Rinse mouth.  
 P363 - Wash contaminated clothing before reuse.  
 P370 + P378 - In case of fire: Use chemical powder to extinguish.  
 P390 - Absorb spillage to prevent material damage.

**Storage statement(s):**

P403 + P235 - Store in a well-ventilated place. Keep cool.  
 P405 - Store locked up.

**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
didecyldimethylammonium chloride	7173-51-5	230-525-2	3-10
alkyldimethylbenzylammoniumchloride	68424-85-1	270-325-2	3-10
ethanol	64-17-5	200-578-6	3-10
tetrasodium ethylene diamine tetraacetate	64-02-8	200-573-9	1-3
1-Dodecanamine, N,N-dimethyl-, N-oxide	1643-20-5	216-700-6	1-3
Carbonic acid, sodium salt (2:3)	533-96-0	208-580-9	1-3

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****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 reuse. Immediately call a POISON CENTRE, doctor or physician.

**Eye contact:**

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

**Ingestion:**

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

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

## VIREX II

**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**

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. 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**

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

**6.4 Reference to other sections**

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

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

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use non-sparking tools.

**Measures required to protect the environment:**

For environmental exposure controls see subsection 8.2.

**Advices on general occupational hygiene:**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless advised by Diversey. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. 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 from freezing. 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)
ethanol	1000 ppm 1880 mg/m <sup>3</sup>		

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.*

## VIREX II

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:** No special requirements under normal use conditions.

**Personal protective equipment**

**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:  $\geq 480$  min Material thickness:  $\geq 0.7$  mm  
Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time:  $\geq 30$  min Material thickness:  $\geq 0.4$  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:** 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:** Should not reach sewage water or drainage ditch undiluted.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

	Method / remark
<b>Physical State:</b> Liquid	
<b>Colour:</b> Clear, Blue	
<b>Odour:</b> Product specific	
<b>Odour threshold:</b> Not applicable	
<b>pH</b> $\approx 10.2$ (neat)	ISO 4316
<b>Dilution pH:</b> $\approx 9$ (0.39 %)	ISO 4316
<b>Melting point/freezing point (°C):</b> Not determined	Not relevant to classification of this product
<b>Initial boiling point and boiling range (°C):</b> Not determined	
<b>Flammability (liquid):</b> Combustible.	
<b>Flash point (°C):</b> $> 86$ °C	closed cup
<b>Sustained combustion:</b> Not applicable. ( UN Manual of Tests and Criteria, section 32, L.2 )	
<b>Evaporation rate:</b> Not determined	Not relevant to classification of this product
<b>Flammability (solid, gas):</b> Not applicable to liquids	
<b>Upper/lower flammability limit (%):</b> Not determined	
<b>Vapour pressure:</b> Not determined	
<b>Vapour density:</b> Not determined	Not relevant to classification of this product
<b>Relative density:</b> $\approx 1$ (20 °C)	OECD 109 (EU A.3)
<b>Solubility in / Miscibility with Water:</b> Fully miscible	
<b>Partition coefficient: n-octanol/water</b> No information available.	
Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3	
<b>Autoignition temperature:</b> Not determined	
<b>Decomposition temperature:</b> Not applicable.	
<b>Viscosity:</b> Not determined	
<b>Explosive properties:</b> Not explosive. Vapours may form explosive mixtures with air.	
<b>Oxidising properties:</b> Not oxidising	

### 9.2 Other information

## VIREX II

**Surface tension (N/m):** Not determined

**Corrosion to metals:** Not determined

## 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): 1600

ATE - Inhalatory, mists (mg/l): >5

#### Skin irritation and corrosivity

**Result:** Skin corrosive 1C

**Species:** Rabbit

**Method:** EPA OPP 81-5

#### Eye irritation and corrosivity

**Result:** Eye damage 1

**Species:** Rabbit

**Method:** OECD 405 (EU B.5)

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)
didecyldimethylammonium chloride	LD <sub>50</sub>	238	Rat	Method not given	
alkyldimethylbenzylammoniumchloride	LD <sub>50</sub>	398	Rat		
ethanol	LD <sub>50</sub>	5000	Rat	OECD 401 (EU B.1)	
tetrasodium ethylene diamine tetraacetate	LD <sub>50</sub>	1780	Rat	OECD 401 (EU B.1)	
1-Dodecanamine, N,N-dimethyl-, N-oxide		No data available			
Carbonic acid, sodium salt (2:3)		No data available			

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
didecyldimethylammonium chloride		No data available			
alkyldimethylbenzylammoniumchloride	LD <sub>50</sub>	3412	Rabbit	Method not given	
ethanol	LD <sub>50</sub>	> 10000	Rabbit	OECD 402 (EU B.3)	
tetrasodium ethylene diamine tetraacetate	LD <sub>50</sub>	> 5000	Rabbit	Method not given	
1-Dodecanamine, N,N-dimethyl-, N-oxide		No data available			
Carbonic acid, sodium salt (2:3)		No data available			

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
didecyldimethylammonium chloride		No data available			
alkyldimethylbenzylammoniumchloride		No data available			
ethanol	LC <sub>50</sub>	> 1800	Rat	Non guideline test	4
tetrasodium ethylene diamine tetraacetate	LC <sub>50</sub>	≥ 1-5 (dust)	Rat	OECD 403 (EU B.2)	6
1-Dodecanamine, N,N-dimethyl-, N-oxide		No data			

## VIREX II

		available		
Carbonic acid, sodium salt (2:3)		No data available		

**Irritation and corrosivity**

## Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
didecyltrimethylammonium chloride	Corrosive	Rabbit	OECD 404 (EU B.4)	
alkyldimethylbenzylammoniumchloride	Corrosive	Rabbit	Method not given	
ethanol	No data available			
tetrasodium ethylene diamine tetraacetate	Not irritant	Rabbit	OECD 404 (EU B.4)	
1-Dodecanamine, N,N-dimethyl-, N-oxide	No data available			
Carbonic acid, sodium salt (2:3)	No data available			

## Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
didecyltrimethylammonium chloride	Severe damage			
alkyldimethylbenzylammoniumchloride	Severe damage		Method not given	
ethanol	No data available			
tetrasodium ethylene diamine tetraacetate	Severe damage		Method not given	
1-Dodecanamine, N,N-dimethyl-, N-oxide	No data available			
Carbonic acid, sodium salt (2:3)	No data available			

## Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
didecyltrimethylammonium chloride	No data available			
alkyldimethylbenzylammoniumchloride	No data available			
ethanol	No data available			
tetrasodium ethylene diamine tetraacetate	No data available			
1-Dodecanamine, N,N-dimethyl-, N-oxide	No data available			
Carbonic acid, sodium salt (2:3)	No data available			

**Sensitisation**

## Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
didecyltrimethylammonium chloride	Not sensitising	Guinea pig	OECD 406 (EU B.6) / Buehler test	
alkyldimethylbenzylammoniumchloride	Not sensitising	Guinea pig	OECD 406 (EU B.6) / Buehler test	
ethanol	No data available			
tetrasodium ethylene diamine tetraacetate	Not sensitising	Guinea pig	OECD 406 (EU B.6) / GPMT	
1-Dodecanamine, N,N-dimethyl-, N-oxide	No data available			
Carbonic acid, sodium salt (2:3)	No data available			

## Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
didecyltrimethylammonium chloride	No data available			
alkyldimethylbenzylammoniumchloride	No data available			
ethanol	No data available			
tetrasodium ethylene diamine tetraacetate	No data available			
1-Dodecanamine, N,N-dimethyl-, N-oxide	No data available			
Carbonic acid, sodium salt (2:3)	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)
didecyltrimethylammonium chloride	No evidence of genotoxicity, negative test results	OECD 471 (EU B.12/13) OECD 473 OECD 476	No data available	
alkyldimethylbenzylammoniumchloride	No evidence of genotoxicity, negative test results	OECD 471 (EU B.12/13) OECD 476 OECD 473	No evidence of genotoxicity, negative test results	OECD 474 (EU B.12)
ethanol	No data available		No data available	
tetrasodium ethylene diamine tetraacetate	No evidence for mutagenicity, negative test results	Method not given	No evidence of genotoxicity, negative test results	Method not given
1-Dodecanamine, N,N-dimethyl-, N-oxide	No data available		No data available	
Carbonic acid, sodium salt (2:3)	No data available		No data available	

## Carcinogenicity

Ingredient(s)	Effect
didecyltrimethylammonium chloride	No data available
alkyldimethylbenzylammoniumchloride	No data available
ethanol	No data available
tetrasodium ethylene diamine tetraacetate	No evidence for carcinogenicity, weight-of-evidence
1-Dodecanamine, N,N-dimethyl-, N-oxide	No data available

## VIREX II

Carbonic acid, sodium salt (2:3)	No data available
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## Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
didecyldimethylammonium chloride			No data available				
alkyldimethylbenzylammoniumchloride			No data available				
ethanol			No data available				
tetrasodium ethylene diamine tetraacetate			No data available				No evidence for reproductive toxicity
1-Dodecanamine, N,N-dimethyl-, N-oxide			No data available				
Carbonic acid, sodium salt (2:3)			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
didecyldimethylammonium chloride		No data available				
alkyldimethylbenzylammoniumchloride		No data available				
ethanol		No data available				
tetrasodium ethylene diamine tetraacetate		No data available				
1-Dodecanamine, N,N-dimethyl-, N-oxide		No data available				
Carbonic acid, sodium salt (2:3)		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
didecyldimethylammonium chloride		No data available				
alkyldimethylbenzylammoniumchloride		No data available				
ethanol		No data available				
tetrasodium ethylene diamine tetraacetate		No data available				
1-Dodecanamine, N,N-dimethyl-, N-oxide		No data available				
Carbonic acid, sodium salt (2:3)		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
didecyldimethylammonium chloride		No data available				
alkyldimethylbenzylammoniumchloride		No data available				
ethanol		No data available				
tetrasodium ethylene diamine tetraacetate		No data available				
1-Dodecanamine, N,N-dimethyl-, N-oxide		No data available				
Carbonic acid, sodium salt (2:3)		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
didecyldimethylammonium chloride			No data available					
alkyldimethylbenzylammoniumchloride			No data available					
ethanol			No data available					
tetrasodium ethylene diamine tetraacetate			No data available					
1-Dodecanamine, N,N-dimethyl-, N-oxide			No data available					
Carbonic acid, sodium salt (2:3)			No data available					

## STOT-single exposure

## VIREX II

Ingredient(s)	Affected organ(s)
didecyldimethylammonium chloride	No data available
alkyldimethylbenzylammoniumchloride	No data available
ethanol	No data available
tetrasodium ethylene diamine tetraacetate	No data available
1-Dodecanamine, N,N-dimethyl-, N-oxide	No data available
Carbonic acid, sodium salt (2:3)	No data available

## STOT-repeated exposure

Ingredient(s)	Affected organ(s)
didecyldimethylammonium chloride	No data available
alkyldimethylbenzylammoniumchloride	No data available
ethanol	No data available
tetrasodium ethylene diamine tetraacetate	Respiratory tract
1-Dodecanamine, N,N-dimethyl-, N-oxide	No data available
Carbonic acid, sodium salt (2:3)	No data available

## Aspiration hazard

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

## Potential adverse health effects and symptoms

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

## 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)
didecyldimethylammonium chloride	LC <sub>50</sub>	0.97	<i>Brachydanio rerio</i>	OECD 203 (EU C.1)	96
alkyldimethylbenzylammoniumchloride	LC <sub>50</sub>	0.515	<i>Fish</i>	Method not given	96
ethanol	LC <sub>50</sub>	8150	<i>Alburnus alburnus</i>	Method not given	96
tetrasodium ethylene diamine tetraacetate	LC <sub>50</sub>	> 100	<i>Lepomis macrochirus</i>	OPP 72-1, static (EPA)	96
1-Dodecanamine, N,N-dimethyl-, N-oxide		No data available			
Carbonic acid, sodium salt (2:3)		No data available			

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
didecyldimethylammonium chloride	EC <sub>50</sub>	0.053	<i>Daphnia magna Straus</i>	OECD 202 (EU C.2)	48
alkyldimethylbenzylammoniumchloride	EC <sub>50</sub>	0.016	<i>Daphnia</i>	Method not given	48
ethanol	EC <sub>50</sub>	9268 - 14221	<i>Daphnia magna Straus</i>	Method not given	48
tetrasodium ethylene diamine tetraacetate	EC <sub>50</sub>	140	<i>Daphnia magna Straus</i>	DIN 38412, Part 11	48
1-Dodecanamine, N,N-dimethyl-, N-oxide		No data available	<i>Daphnia</i>		
Carbonic acid, sodium salt (2:3)		No data available			

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
didecyldimethylammonium chloride	EC <sub>50</sub>	0.053	<i>Pseudokirchneriella subcapitata</i>	OECD 201 (EU C.3)	72
alkyldimethylbenzylammoniumchloride	EC <sub>50</sub>	0.02	<i>Selenastrum capricornutum</i>	OECD 201 (EU C.3)	72
ethanol	EC <sub>0</sub>	5000	<i>Scenedesmus quadricauda</i>	Method not given	168
tetrasodium ethylene diamine tetraacetate	EC <sub>50</sub>	> 100	<i>Scenedesmus obliquus</i>	88/302/EEC, Part C, static	72
1-Dodecanamine, N,N-dimethyl-, N-oxide		No data available			
Carbonic acid, sodium salt (2:3)		No data available			

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value	Species	Method	Exposure
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## VIREX II

	(mg/l)	time (days)
didecyldimethylammonium chloride	No data available	-
alkyldimethylbenzylammoniumchloride	No data available	-
ethanol	No data available	-
tetrasodium ethylene diamine tetraacetate	No data available	-
1-Dodecanamine, N,N-dimethyl-, N-oxide	No data available	-
Carbonic acid, sodium salt (2:3)	No data available	-

## Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
didecyldimethylammonium chloride		No data available			
alkyldimethylbenzylammoniumchloride	EC <sub>20</sub>	5	Activated sludge	OECD 209	0.5 hour(s)
ethanol	EC <sub>0</sub>	6500	<i>Pseudomonas putida</i>	Method not given	16 hour(s)
tetrasodium ethylene diamine tetraacetate	EC <sub>20</sub>	> 500	Activated sludge	OECD 209	0.5 hour(s)
1-Dodecanamine, N,N-dimethyl-, N-oxide		No data available			
Carbonic acid, sodium salt (2:3)		No data available			

## Aquatic long-term toxicity

## Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
didecyldimethylammonium chloride		No data available				
alkyldimethylbenzylammoniumchloride		No data available				
ethanol		No data available				
tetrasodium ethylene diamine tetraacetate	NOEC	> 25.7	<i>Brachydanio rerio</i>	OECD 210	35 day(s)	
1-Dodecanamine, N,N-dimethyl-, N-oxide		No data available				
Carbonic acid, sodium salt (2:3)		No data available				

## Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
didecyldimethylammonium chloride	NOEC	> 0.01-0.1	<i>Daphnia magna</i>	OECD 211	21 day(s)	
alkyldimethylbenzylammoniumchloride	NOEC	0.025	<i>Daphnia magna</i>	OECD 211	21 day(s)	
ethanol		No data available				
tetrasodium ethylene diamine tetraacetate	NOEC	25	<i>Daphnia magna</i>	OECD 211	21 day(s)	
1-Dodecanamine, N,N-dimethyl-, N-oxide		No data available				
Carbonic acid, sodium salt (2:3)		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
didecyldimethylammonium chloride		No data available			-	
alkyldimethylbenzylammoniumchloride		No data available			-	
ethanol		No data available			-	
tetrasodium ethylene diamine tetraacetate		No data available			-	
1-Dodecanamine, N,N-dimethyl-, N-oxide		No data available			-	
Carbonic acid, sodium salt (2:3)		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
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## VIREX II

didecyldimethylammonium chloride		No data available			-	
alkyldimethylbenzylammoniumchloride		No data available			-	
ethanol		No data available			-	
tetrasodium ethylene diamine tetraacetate	LD <sub>50</sub>	156	<i>Eisenia fetida</i>	OECD 207	14	

Terrestrial toxicity - plants, if available:

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

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
didecyldimethylammonium chloride		No data available			-	
alkyldimethylbenzylammoniumchloride		No data available			-	
ethanol		No data available			-	
tetrasodium ethylene diamine tetraacetate		No data available			-	

Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
didecyldimethylammonium chloride		No data available			-	
alkyldimethylbenzylammoniumchloride		No data available			-	
ethanol		No data available			-	
tetrasodium ethylene diamine tetraacetate		No data available			-	

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
didecyldimethylammonium chloride		No data available			-	
alkyldimethylbenzylammoniumchloride		No data available			-	
ethanol		No data available			-	
tetrasodium ethylene diamine tetraacetate		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**

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT <sub>50</sub>	Method	Evaluation
didecyldimethylammonium chloride		Oxygen depletion	> 60%	OECD 301D	Readily biodegradable
alkyldimethylbenzylammoniumchloride		Oxygen depletion	> 60%	Read across	Readily biodegradable
ethanol				OECD 301B	Readily biodegradable
tetrasodium ethylene diamine tetraacetate					Not readily biodegradable.
1-Dodecanamine, N,N-dimethyl-, N-oxide				OECD 301B	Readily biodegradable
Carbonic acid, sodium salt (2:3)					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
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## VIREX II

didecyldimethylammonium chloride	No data available		
alkyldimethylbenzylammoniumchloride	2.88	OECD 107	No bioaccumulation expected
ethanol	-0.35	Weight of evidence	
tetrasodium ethylene diamine tetraacetate	-13	Method not given	No bioaccumulation expected
1-Dodecanamine, N,N-dimethyl-, N-oxide	No data available		
Carbonic acid, sodium salt (2:3)	No data available		

## Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
didecyldimethylammonium chloride	2.1		Method not given	No bioaccumulation expected	
alkyldimethylbenzylammoniumchloride	0.5		Method not given	No bioaccumulation expected	
ethanol	No data available				
tetrasodium ethylene diamine tetraacetate	1.8	<i>Lepomis macrochirus</i>	Method not given	Low potential for bioaccumulation	
1-Dodecanamine, N,N-dimethyl-, N-oxide	No data available				
Carbonic acid, sodium salt (2:3)	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
didecyldimethylammonium chloride	No data available				
alkyldimethylbenzylammoniumchloride	No data available				
ethanol	No data available				
tetrasodium ethylene diamine tetraacetate	No data available				Adsorption to solid soil phase is not expected
1-Dodecanamine, N,N-dimethyl-, N-oxide	No data available				
Carbonic acid, sodium salt (2:3)	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

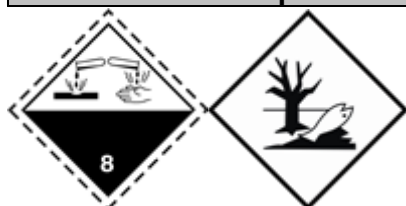
Recommendation:

Dispose of observing national or local regulations.

Suitable cleaning agents:

Water, if necessary with cleaning agent.

## SECTION 14: Transport information



## ADG, IMO/IMDG, ICAO/IATA

14.1 UN number: 1903

14.2 UN proper shipping name:

Disinfectant, liquid, corrosive, n.o.s. quaternary ammonium compounds

14.3 Transport hazard class(es):

Transport hazard class (and subsidiary risks): 8

14.4 Packing group: III

14.5 Environmental hazards:

Environmentally hazardous: Yes

Marine pollutant: Yes

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

ADR

## VIREX II

The product has been classified, labelled and packaged in accordance with the requirements of ADG7.6 Code 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

<b>National regulations</b>	Globally Harmonised System of Classification and Labelling of Chemicals (GHS) as published by Safework Australia.
<b>Poison schedule</b>	Classified as a Schedule 5 (S5) Poison using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
<b>Classification</b>	Globally Harmonised System of Classification and Labelling of Chemicals (GHS) as published by Safework Australia.
<b>Inventory listing(s)</b>	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*

**SDS code:** MS31001019

**Version:** 01.1

**Revision:** 2020-05-03

### 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 - Non GHS 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**