

# SAFETY DATA SHEET

## VIRKON S



Version 2.0      Revision Date: 04.11.2019      SDS Number: 103000008259      Date of last issue: 14.06.2018  
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### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : VIRKON S  
Product code : 57747484

#### Manufacturer or supplier's details

Supplier : LANXESS Pty Ltd  
2d Factory Street Granville, NSW 2142, Australia  
Telephone : +61288687211  
E-mail address of person responsible for the SDS : infosds@lanxess.com  
Emergency telephone number : IXOM Emergency Response Service (ERS)  
Phone 1800 033 111 • 24 hours • Toll-free • Australia wide

#### Recommended use of the chemical and restrictions on use

Recommended use : Disinfectants


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### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

Skin corrosion/irritation : Category 2  
Serious eye damage/eye irritation : Category 1  
Short-term (acute) aquatic hazard : Category 2  
Long-term (chronic) aquatic hazard : Category 3

#### GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H401 Toxic to aquatic life.  
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P264 Wash skin thoroughly after handling.

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P273 Avoid release to the environment.  
P280 Wear protective gloves/ eye protection/ face protection.

### Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.

### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards which do not result in classification

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

Chemical name	CAS-No.	Concentration (% w/w)
pentapotassium bis(peroxymonosulphate) bis(sulphate)	70693-62-8	>= 30 -< 60
Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	>= 10 -< 25
malic acid	6915-15-7	< 10
sulphamidic acid	5329-14-6	>= 2.5 -< 10
potassium hydrogensulphate	7646-93-7	>= 1 -< 3
dipotassium disulphate	7790-62-7	>= 1 -< 3
sodium toluenesulphonate	12068-03-0	< 10
dipotassium peroxodisulphate	7727-21-1	>= 0.25 -< 1
dipentene	138-86-3	>= 0.025 -< 0.25

## SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.  
Consult a physician.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician.  
If on skin, rinse well with water.  
If on clothes, remove clothes.

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- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.  
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Continue rinsing eyes during transport to hospital.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
Do NOT induce vomiting.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : None known.
- Notes to physician : Treat symptomatically.
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### SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : In case of fire, use water spray (fog), foam or dry chemical.
- Unsuitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
High volume water jet
- Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Sulphur oxides  
Metal oxides  
Carbon dioxide (CO<sub>2</sub>)  
Carbon monoxide  
Nitrogen oxides (NO<sub>x</sub>)  
Halogenated compounds
- Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
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### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Avoid dust formation.  
Avoid breathing dust.
- Environmental precautions : Prevent product from entering drains.
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Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Neutralize with chalk, alkali solution or ammonia.  
Keep in suitable, closed containers for disposal.

### SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Avoid dust formation.  
Provide appropriate exhaust ventilation at places where dust is formed.

Advice on safe handling : Protect from moisture.  
  
Avoid formation of respirable particles.  
Do not breathe vapours/dust.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Dispose of rinse water in accordance with local and national regulations.

Hygiene measures : When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

Conditions for safe storage : Protect from moisture.  
Combustible substances  
Strong bases  
  
Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : Do not store near acids.

Recommended storage temperature : < 50 °C

Further information on storage stability : Keep in a dry place.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parameters / Permissible	Basis
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		exposure)	concentration	
dipotassium peroxodisulphate	7727-21-1	Peak limit	0.1 mg/m <sup>3</sup>	AU OEL
Further information: Sensitiser				
		TWA	0.1 mg/m <sup>3</sup> (Persulphate)	ACGIH

**Engineering measures** : This information is not available.

### Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.

Filter type : Recommended Filter type:  
ABEK-P2-filter

Hand protection  
Material : Butyl rubber - IIR  
Wearing time : < 60 min

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves. After contamination with product change the gloves immediately and dispose of them according to relevant national and local regulations

Eye protection : Tightly fitting safety goggles  
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Wear suitable protective clothing.  
Dust impervious protective suit  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : powder  
Colour : pink  
Odour : pleasant, sweet  
Odour Threshold : No data available not determined  
pH : 2.35 - 2.65  
Concentration: 1 %  
Melting point/range : No data available Biocides Authorization not required  
Boiling point/boiling range : No data available Biocides Authorization not required  
Flash point : Not applicable Solid

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Evaporation rate : No data available Biocides Authorization not required

Flammability (solid, gas) : The product is not flammable.

Burning number : Not applicable

Upper explosion limit / Upper flammability limit : Not applicable Solid

Lower explosion limit / Lower flammability limit : Not applicable Solid

Vapour pressure : No data available Biocides Authorization not required

Relative vapour density : Not applicable Solid

Relative density : 1.07

Density : 1.07 g/cm<sup>3</sup> (20 °C)

Solubility(ies)  
Water solubility : 65 g/l

Partition coefficient: n-octanol/water : Not applicable Preparation

Ignition temperature : Not applicable Solid

Decomposition temperature : > 50 °C

Viscosity  
Viscosity, dynamic : Not applicable Solid  
Viscosity, kinematic : Not applicable Solid

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.  
Method: Regulation (EC) No. 440/2008, Annex, A.17

Molecular weight : No data available

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### SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous reactions : No decomposition if stored and applied as directed.  
Dust may form explosive mixture in air.

Conditions to avoid : Exposure to moisture

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Incompatible materials : Incompatible with acids.  
Combustible material  
Oxidizing agents  
Strong bases  
brass  
Cyanides  
Copper  
Halogenated compounds  
Metal salt.

Hazardous decomposition products : Oxygen  
Chlorine  
Sulphur oxides  
Hypochlorites

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## SECTION 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### **Product:**

Acute oral toxicity : LD50 (Rat, male and female): 4,123 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes

Acute inhalation toxicity : LC50 (Rat): 3.7 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: the particle size measurements of the product indicate that it is not respirable and therefore not bioavailable by the inhalation route.

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg  
Remarks: Extrapolation according to Regulation (EC) No. 440/2008

#### **Components:**

##### **pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Acute oral toxicity : LD50 (Rat, male and female): 500 mg/kg  
Method: OECD Test Guideline 423

Acute inhalation toxicity : LC0 (Rat, male): > 5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: Highest producible concentration.

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

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Method: OECD Test Guideline 402  
Remarks: Extrapolation according to Regulation (EC) No. 440/2008

**Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts:**

Acute oral toxicity : LD50 (Rat, male and female): 1,080 mg/kg  
Method: OECD Test Guideline 401  
GLP: no

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: Dosage caused no mortality

**malic acid:**

Acute oral toxicity : LD50 (Rat, male and female): 3,500 mg/kg  
Method: OECD Test Guideline 401  
GLP: no

Acute inhalation toxicity : LC0 (Rat, male and female): > 1.306 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Remarks: Highest producible concentration.

Acute dermal toxicity : LD50 (Rabbit, female): > 5,000 mg/kg  
Method: OECD Test Guideline 401  
GLP: no

**sulphamidic acid:**

Acute oral toxicity : LD50 (Rat, female): 2,065 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: Extrapolation according to Regulation (EC) No. 440/2008

**potassium hydrogensulphate:**

Acute oral toxicity : LD50 (Rat): 2,340 mg/kg

**dipotassium disulphate:**

Acute oral toxicity : LD50 (Rat, male): 2,140 mg/kg  
Method: OECD Test Guideline 401  
Remarks: Test results on an analogous product



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Acute inhalation toxicity : Assessment: Corrosive to the respiratory tract.  
Assessment: The component/mixture is toxic after short term inhalation.

### **sodium toluenesulphonate:**

Acute oral toxicity : LD50 (Rat): 6,500 mg/kg  
Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

### **dipotassium peroxodisulphate:**

Acute oral toxicity : LD50 (Rat): 700 mg/kg  
Acute inhalation toxicity : LC0 (Rat): > 2.95 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Remarks: Highest producible concentration.  
Acute dermal toxicity : LD50 (Rabbit): > 10,000 mg/kg

### **dipentene:**

Acute oral toxicity : LD50 (Rat): 5,300 mg/kg  
Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg

### **Skin corrosion/irritation**

#### **Product:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: Irritating to skin.

#### **Components:**

#### **pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: Causes burns.

#### **Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: Irritating to skin.  
GLP: no

#### **malic acid:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: No skin irritation

#### **sulphamidic acid:**

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Species: Rabbit  
Method: OECD Test Guideline 404  
Result: Irritating to skin.

**potassium hydrogensulphate:**

Assessment: Causes burns.

**dipotassium disulphate:**

Assessment: Causes severe burns.

**sodium toluenesulphonate:**

Species: Rabbit  
Result: Irritating to skin.

**dipotassium peroxodisulphate:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: Irritating to skin.

**dipentene:**

Assessment: Irritating to skin.

**Serious eye damage/eye irritation**

**Components:**

**pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Species: Rabbit  
Result: Risk of serious damage to eyes.  
Method: OECD Test Guideline 405

**Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts:**

Species: Rabbit  
Result: Irreversible effects on the eye  
Method: OECD Test Guideline 405  
GLP: yes

**malic acid:**

Species: Rabbit  
Result: Irritating to eyes.  
Method: OECD Test Guideline 405

**sulphamidic acid:**

Species: Rabbit  
Result: Irritating to eyes.  
Method: OECD Test Guideline 405

**dipotassium disulphate:**

Assessment: Risk of serious damage to eyes.

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**sodium toluenesulphonate:**

Species: Rabbit  
Result: Irritating to eyes.

**dipotassium peroxodisulphate:**

Result: Irritating to eyes.

**dipentene:**

Species: Rabbit  
Result: Irritating to eyes.

**Respiratory or skin sensitisation**

**Product:**

Exposure routes: Skin contact  
Species: Guinea pig  
Method: OECD Test Guideline 406  
Result: Did not cause sensitisation on laboratory animals.

Exposure routes: Inhalation  
Species: Mammal - species unspecified  
Method: Expert judgement  
Result: Does not cause respiratory sensitisation.

**Components:**

**pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Exposure routes: Skin contact  
Species: Guinea pig  
Method: OECD Test Guideline 406  
Result: Does not cause skin sensitisation.

**Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts:**

Test Type: Maximisation Test  
Exposure routes: Skin contact  
Species: Guinea pig  
Method: OECD Test Guideline 406  
Result: Did not cause sensitisation on laboratory animals.  
GLP: yes

**malic acid:**

Exposure routes: Skin contact  
Species: Guinea pig  
Method: OECD Test Guideline 406  
Result: Did not cause sensitisation on laboratory animals.  
GLP: yes

**sulphamidic acid:**

Result: Did not cause sensitisation on laboratory animals.





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Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative

Test system: Bacteria  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

**sodium toluenesulphonate:**

Genotoxicity in vitro : Remarks: No mutagenic effect.

**dipotassium peroxodisulphate:**

Genotoxicity in vitro : Remarks: Not mutagenic in a standard battery of genetic toxicological tests.

**Reproductive toxicity**

**Components:**

**pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Effects on foetal development : Remarks: No teratogenic or foetotoxic effects were found at all dose levels tested.

**Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts:**

Effects on fertility : Test Type: Three-generation study  
Species: Rat, male and female  
Application Route: Oral  
Dose: 0 - 14 - 70 - 350 milligram per kilogram  
General Toxicity - Parent: NOAEL: 350 mg/kg body weight  
General Toxicity F1: NOAEL: 350 mg/kg body weight  
General Toxicity F2: NOAEL: 350 mg/kg body weight  
Fertility: NOAEL: 350 mg/kg body weight  
Result: Animal testing did not show any effects on fertility.  
GLP: no  
Remarks: Test results on an analogous product

Effects on foetal development : Species: Rat, female  
Application Route: Oral  
General Toxicity Maternal: NOAEL: 300 mg/kg body weight  
Teratogenicity: NOAEL: 300 mg/kg body weight  
Result: No teratogenic effects  
GLP: no  
Remarks: Test results on an analogous product

**malic acid:**

Effects on foetal development : Remarks: No known significant effects or critical hazards.

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**STOT - single exposure**

**Components:**

**potassium hydrogensulphate:**

Assessment: May cause respiratory irritation.

**dipotassium peroxodisulphate:**

Assessment: May cause respiratory irritation.

**Repeated dose toxicity**

**Components:**

**pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Species: Rat, male and female  
LOAEL: > 1,000 mg/kg  
Application Route: Oral  
Exposure time: 28 d  
Number of exposures: 7 days/week  
Method: OECD Test Guideline 407  
Remarks: Subacute toxicity

Species: Rat, male and female  
LOAEL: 600 mg/kg  
Application Route: Oral  
Exposure time: 90 d  
Number of exposures: 7 days/week  
Method: OECD Test Guideline 408  
Remarks: Subchronic toxicity

**Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts:**

Species: Rat, male and female  
NOAEL: 85 mg/kg  
LOAEL: 145 mg/kg  
Application Route: Oral  
Exposure time: 36 w  
Number of exposures: daily  
GLP: no  
Remarks: Subchronic toxicity

**malic acid:**

Remarks: No known significant effects or critical hazards.

**sodium toluenesulphonate:**

Species: Rat  
NOAEL: 114 mg/kg  
Application Route: Oral  
Exposure time: 91 d  
Method: OECD Test Guideline 408  
Remarks: Subchronic toxicity

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**Further information**

**Product:**

Remarks: No data available

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

- Toxicity to fish : LC50 (Salmo salar (Atlantic salmon)): 24.6 mg/l  
Exposure time: 96 h  
Method: Regulation (EC) No. 440/2008, Annex, C.1  
Remarks: Fresh water
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 6.5 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: Fresh water
- Toxicity to algae : NOEC (Desmodesmus subspicatus (green algae)): 6.25 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Fresh water

**Components:**

**pentapotassium bis(peroxymonosulphate) bis(sulphate):**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 53 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
GLP: yes  
Remarks: Fresh water
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3.5 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
GLP: yes  
Remarks: Fresh water
- Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (microalgae)): > 1 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: Fresh water
- NOEC (Pseudokirchneriella subcapitata (microalgae)): 0.5 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: Fresh water

**Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts:**

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- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 2.88 mg/l  
Exposure time: 96 h  
Analytical monitoring: yes  
Method: OECD Test Guideline 203  
GLP: no  
Remarks: Fresh water
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.9 mg/l  
Exposure time: 48 h  
Analytical monitoring: yes  
Method: OECD Test Guideline 202  
GLP: yes  
Remarks: Fresh water
- Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 235 mg/l  
Exposure time: 72 h  
Analytical monitoring: no  
Method: OECD Test Guideline 201  
GLP: no  
Remarks: Fresh water
- EC10 (Pseudokirchneriella subcapitata (green algae)): 13.1 mg/l  
Exposure time: 72 h  
Analytical monitoring: no  
Method: OECD Test Guideline 201  
GLP: no  
Remarks: Fresh water
- Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.23 mg/l  
Exposure time: 72 d  
Analytical monitoring: yes  
Method: OECD Test Guideline 210  
GLP: no  
Remarks: Fresh water
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 1.18 mg/l  
Exposure time: 21 d  
Analytical monitoring: yes  
Method: OECD Test Guideline 211  
GLP: no  
Remarks: Fresh water
- malic acid:**
- Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
GLP: yes  
Remarks: Fresh water
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 240 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
GLP: yes
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Remarks: Fresh water

Toxicity to algae : EC50 (algae): > 100 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: Fresh water

NOEC (algae): 100 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: Fresh water

### **sulphamidic acid:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 70.3 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
GLP: no  
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 71.6 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
GLP: yes  
Remarks: Fresh water

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 48 mg/l  
End point: Growth rate  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: Fresh water

NOEC (Desmodesmus subspicatus (green algae)): 18 mg/l  
End point: Growth rate  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: Fresh water

Toxicity to fish (Chronic toxicity) : NOEC (Danio rerio (zebra fish)): >= 60 mg/l  
Exposure time: 34 d  
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 19 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211

Toxicity to microorganisms : EC50: > 200 mg/l  
End point: Respiration inhibition  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
GLP: yes  
Remarks: Fresh water

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**dipotassium disulphate:**

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 680 mg/l  
Exposure time: 96 h  
Remarks: Fresh water
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 720 mg/l  
Exposure time: 48 h  
Remarks: Fresh water
- Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (microalgae)): 1,492 mg/l  
Exposure time: 96 h  
Remarks: Fresh water
- EC10 (Pseudokirchneriella subcapitata (microalgae)): 656 mg/l  
Exposure time: 96 h  
Remarks: Fresh water
- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): > 595 mg/l  
Exposure time: 7 Days  
Remarks: Fresh water
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (Water flea)): 790 mg/l  
Exposure time: 7 Days  
Remarks: Fresh water

**sodium toluenesulphonate:**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 490 mg/l  
Exposure time: 96 h  
Remarks: Fresh water
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 318 mg/l  
Exposure time: 48 h  
Remarks: Fresh water
- Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 245 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Fresh water
- NOEC (Desmodesmus subspicatus (green algae)): 18 mg/l  
Exposure time: 72 h  
Remarks: Fresh water

**dipotassium peroxodisulphate:**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 76.3 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 120 mg/l  
Exposure time: 48 h
- Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (microalgae)): 83.7
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mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

**Ecotoxicology Assessment**

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

**dipentene:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0.702 mg/l  
Exposure time: 96 h  
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.421 mg/l  
Exposure time: 48 h  
Remarks: Fresh water

M-Factor (Acute aquatic toxicity) : 1

**Persistence and degradability**

**Components:**

**pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Biodegradability : Result: The methods for determining the biological degradability are not applicable to inorganic substances.

**Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 83 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B  
GLP: yes

**malic acid:**

Biodegradability : aerobic  
Result: Readily biodegradable.  
Biodegradation: 67.5 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B  
GLP: yes

**sulphamidic acid:**

Biodegradability : Result: The methods for determining the biological degradability are not applicable to inorganic substances.

**dipotassium disulphate:**

Biodegradability : Result: The methods for determining the biological degradability are not applicable to inorganic substances.

**sodium toluenesulphonate:**

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Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 0 - 2 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301C

#### **dipotassium peroxodisulphate:**

Biodegradability : Result: The methods for determining the biological degradability are not applicable to inorganic substances.

#### **dipentene:**

Biodegradability : Result: Not rapidly biodegradable

#### **Bioaccumulative potential**

##### **Components:**

#### **pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Partition coefficient: n-octanol/water : log Pow: < 0.3  
Method: OECD Test Guideline 117

#### **Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts:**

Partition coefficient: n-octanol/water : log Pow: 1.4 (23 °C)  
Method: OECD Test Guideline 123

#### **malic acid:**

Partition coefficient: n-octanol/water : log Pow: -1.26

#### **sulphamidic acid:**

Partition coefficient: n-octanol/water : log Pow: -4.34

#### **Mobility in soil**

No data available

#### **Other adverse effects**

##### **Product:**

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Toxic to aquatic life.  
Harmful to aquatic life with long lasting effects.

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## SECTION 13. DISPOSAL CONSIDERATIONS

#### **Disposal methods**

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.

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Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

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### SECTION 14. TRANSPORT INFORMATION

#### National Regulations

##### ADG

Not regulated as a dangerous good

#### International Regulations

##### IATA-DGR

Not regulated as a dangerous good

##### IMDG-Code

Not regulated as a dangerous good

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**Hazard statements** : Not dangerous cargo.  
Irritating to skin.  
Keep dry.  
Risk of serious damage to eyes.  
Keep separated from foodstuffs.

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### SECTION 15. REGULATORY INFORMATION

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

Standard for the Uniform Scheduling of Medicines and Poisons : Schedule 6

International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors : Not applicable

Prohibition/Licensing Requirements : There is no applicable prohibition or notification/licensing requirements, including for carcinogens under Commonwealth, State or Territory legislation.

Australia. Customs (Prohibited Imports) Regulations (CWC Schedule 1) : Neither banned nor restricted

Australia. Customs (Prohibited Imports) Regulations (CWC Schedule 2) : Neither banned nor restricted

Australia. Customs (Prohibited Imports) Regulations : Neither banned nor restricted

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(CWC Schedule 3)

Importation of ozone-depleting substances and synthetic greenhouse gases : Not applicable

### Other international regulations

No data available

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## SECTION 16. OTHER INFORMATION

### Full text of other abbreviations

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

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ACGIH : USA. ACGIH Threshold Limit Values (TLV)

AU OEL : Australia. Workplace Exposure Standards for Airborne Contaminants.

ACGIH / TWA : 8-hour, time-weighted average

AU OEL / Peak limit : Exposure standard - peak

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.