

**Virkon® -S**

Version 2.10

Revision Date 21.09.2007

Ref. 130000014173

This SDS adheres to the standards and regulatory requirements of Great Britain and may not meet the regulatory requirements in other countries.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product information**

Product name : Virkon® -S

Use of the Substance/Preparation : Disinfectant, Cleaning agent

Company : Antec International Limited
Windham Road
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United Kingdom

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Remarks : Antec International Limited is a wholly owned subsidiary of Dupont (UK) Ltd.

2. HAZARDS IDENTIFICATION

Irritating to skin.
Risk of serious damage to eyes.
Harmful to aquatic organisms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	EC-No.	Classification	Concentration [%]
Pentapotassium bis(peroximonosulphate) bis(sulphate)	70693-62-8	274-778-7	Xn; R22 C; R34 R52	40 - 50
Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	68411-30-3	270-115-0	Xi; R36/38	10 - 12
Sulfamic Acid	5329-14-6	226-218-8	Xi; R36/38 R52 -R53	4 - 6
Malic acid	6915-15-7	230-022-8	Xn; R22 Xi; R37/38 -R41	7 - 10
Sodium Polyphosphate	68915-31-1	272-808-3	Xi; R36/37/38	20 - 25
Dipotassium peroxodisulphate	7727-21-1	231-781-8	O; R 8	< 1,49

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			Xn; R22 Xi; R36/37/38 R42/43	
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For the full text of the R phrases mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

- General advice : Never give anything by mouth to an unconscious person. If a person vomits when lying on his back, place him in the recovery position.
- Inhalation : Remove from exposure, lie down. If victim has stopped breathing: Artificial respiration and/or oxygen may be necessary. Consult a physician.
- Skin contact : Wash off immediately with plenty of water. Consult a physician.
- Eye contact : Remove contact lenses. Rinse immediately with plenty of water and seek medical advice. Call a physician immediately.
- Ingestion : Do NOT induce vomiting. If conscious, drink plenty of water. Call a physician immediately.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Foam, Dry powder, Carbon dioxide (CO₂),
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus and protective suit.
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Evacuate personnel to safe areas. Use personal protective equipment.
- Environmental precautions : Try to prevent the material from entering drains or water courses.
- Methods for cleaning up : Sweep up and shovel into suitable containers for disposal. Avoid dust formation. After cleaning, flush away traces with water.
- Additional advice : Dispose of in accordance with local regulations.

7. HANDLING AND STORAGE**Handling**

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Advice on safe handling : Avoid dust formation in confined areas. For personal protection see section 8. Avoid contact with skin and eyes.

Storage

Requirements for storage areas and containers : Protect from contamination. Store in original container. Keep in a dry, cool place.

Advice on common storage : Keep away from: Combustible material

Other data : Stable under recommended storage conditions.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Type Form of exposure	Control parameters	Update	Basis
Dust (total and inhalable dust)		TWA Inhalable dust.	10 mg/m ³	2005	EH40 WEL
		TWA Respirable dust.	4 mg/m ³	2005	EH40 WEL
Dipotassium peroxodisulphate	7727-21-1	TWA	1 mg/m ³	2002	EH40 OES

Engineering measures

Provide local exhaust ventilation when handling material in bulk.

Personal protective equipment

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection : Rubber gloves

Eye protection : Tightly fitting safety goggles

Skin and body protection : Wear as appropriate: Apron Boots Remove and wash contaminated clothing before re-use.

Hygiene measures : Wash hands before breaks and immediately after handling the product. Regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : powder,

Colour : pink,

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Odour	:	pleasant, sweet,
pH	:	2,4 - 2,7
Flash point	:	does not flash
Relative density	:	1,07
Water solubility	:	65 g/l at 20 °C

10. STABILITY AND REACTIVITY

Conditions to avoid	:	Exposure to moisture.
Materials to avoid	:	Strong bases, Combustible material
Hazardous decomposition products	:	Sulphur dioxide, Chlorine

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50/ rat: 4 123 mg/kg Method: OECD Test Guideline 401
Acute oral toxicity	:	LD50/ rat : 200 - 2 000 mg/kg
• Pentapotassium bis(peroximonosulphate) bis(sulphate)	:	
• Dipotassium peroxodisulphate	:	LD50/ rat : 1 100 mg/kg
Acute inhalation toxicity	:	LC50/ 4 h / rat : 3,7 mg/l Method: aerosol
Acute inhalation toxicity	:	LC50/ 4 h/ rat : > 5 mg/l
• Pentapotassium bis(peroximonosulphate) bis(sulphate)	:	
Acute dermal toxicity	:	LD50/ rabbit 2 200 mg/kg
Acute dermal toxicity	:	LD50/ rat : > 2 000 mg/kg
• Pentapotassium bis(peroximonosulphate) bis(sulphate)	:	
• Dipotassium peroxodisulphate	:	LD50/ rabbit : > 10 000 mg/kg
Skin irritation	:	Method: OECD Test Guideline 404 Moderate skin irritation
Eye irritation	:	Risk of serious damage to eyes.
Sensitisation	:	Buehler Test guinea pig Result: Animal test did not cause sensitization by skin contact.

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Maximisation Test (GPMT) guinea pig Result: Animal test did not cause sensitization by skin contact.

12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

Biodegradability : Expected to be biodegradable.

Toxicity to fish

• Pentapotassium bis(peroximonosulphate) bis(sulphate) : LC50 / 96 h/ Oncorhynchus mykiss (rainbow trout) : 53 mg/l

Aquatic toxicity

• Pentapotassium bis(peroximonosulphate) bis(sulphate) : / EC50/ 48 h/ Daphnia: 3,5 mg/l

13. DISPOSAL CONSIDERATIONS

Product : Dispose of as special waste in compliance with local and national regulations. The product should not be allowed to enter drains, water courses or the soil.

Contaminated packaging : If recycling is not practicable, dispose of in compliance with local regulations.

14. TRANSPORT INFORMATION

Further information : Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION**Labelling according to EC Directives**

Symbol(s) : Xi Irritant

R-phrase(s) : R38 Irritating to skin.
R41 Risk of serious damage to eyes.
R52 Harmful to aquatic organisms.

S-phrase(s) : S 2 Keep out of reach of children.
S22 Do not breathe dust.
S24/25 Avoid contact with skin and eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

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Sensitising components contains:
Dipotassium peroxodisulphate
May produce an allergic reaction.

16. OTHER INFORMATION**Text of R phrases mentioned in Section 3**

R 8	Contact with combustible material may cause fire.
R22	Harmful if swallowed.
R34	Causes burns.
R36/37/38	Irritating to eyes, respiratory system and skin.
R36/38	Irritating to eyes and skin.
R37/38	Irritating to respiratory system and skin.
R41	Risk of serious damage to eyes.
R42/43	May cause sensitization by inhalation and skin contact.
R52	Harmful to aquatic organisms.
R53	May cause long-term adverse effects in the aquatic environment.

Significant change from previous version is denoted with a double bar.

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 above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.