

**Virkon® S Tablets**

Version 2.0

Revision Date 04/13/2010

Ref. 130000093823

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

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Virkon® S Tablets
MSDS Number : 130000093823

Product Use : Disinfectant, Cleaning agent

Manufacturer : DuPont
1007 Market Street
Wilmington, DE 19898

Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000)
Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)
Transport Emergency : CHEMTREC: 1-800-424-9300 (outside the U.S. 1-703-527-3887)

SECTION 2. HAZARDS IDENTIFICATION

Potential Health Effects

Skin : Irritating to skin.

Eyes : Risk of serious damage to eyes.

Inhalation

Potassium peroxymonosulfate : Causes respiratory tract irritation.

Sulfamic acid : Inhaled corrosive substances can lead to a toxic oedema of the lungs. Harmful if inhaled and may cause delayed lung injury., Liquid aerosols may cause:, Oedema.

Ingestion

Potassium peroxymonosulfate : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Sulfamic acid : Burning sensation Abdominal pain

Sodium chloride : Gastrointestinal discomfort Vomiting, Diarrhoea.

Target Organs

Potassium peroxymonosulfate : Eyes

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Primary Routes of Entry : Eye contact, Skin contact

Carcinogenicity

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Potassium peroxymonosulfate	10058-23-8	21.41 %
Sulfamic acid	5329-14-6	4 - 6 %
Sodium chloride	7647-14-5	1.5 %

SECTION 4. FIRST AID MEASURES

- Skin contact : In case of contact, immediately flush skin with plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Consult a physician if necessary.
- Eye contact : Rinse immediately with plenty of water and seek medical advice.
- Inhalation : Move to fresh air. Consult a physician if necessary.
- Ingestion : Call a poison control center or doctor for treatment advice. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Do not give anything by mouth to an unconscious person.

SECTION 5. FIRE-FIGHTING MEASURES

Flammable Properties

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Flash point	: does not flash
Suitable extinguishing media	: Water spray, Dry powder, Alcohol-resistant foam
Unsuitable extinguishing media	: Carbon dioxide (CO2)
Firefighting Instructions	: Wear self-contained breathing apparatus (SCBA). Wear suitable protective equipment. Evacuate personnel to safe areas. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel)	: Wear suitable protective equipment. Wear respiratory protection.
Spill Cleanup	: Sweep up and shovel into suitable containers for disposal. Avoid dust formation. After cleaning, flush away traces with water.
Accidental Release Measures	: Prevent material from entering sewers, waterways, or low areas. Dispose of in accordance with local regulations.

SECTION 7. HANDLING AND STORAGE

Handling (Personnel)	: Avoid contact with skin, eyes and clothing. Do not get on clothing. Wash off with plenty of water. Wash clothing after use. Do not breathe dust. Avoid dust formation in confined areas. For personal protection see section 8. When using do not eat, drink or smoke.
Storage	: Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container. Keep away from: Combustible material Stable under recommended storage conditions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls	: Provide local exhaust ventilation when handling material in bulk. Ensure adequate ventilation.
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Personal protective equipment

- Respiratory protection : Provide adequate ventilation. Wear NIOSH approved respiratory protection as appropriate.
- Hand protection : Material: Impervious gloves
- Eye protection : Wear coverall chemical splash goggles and face shield when the possibility exists for eye and face contact due to splashing or spraying of material.
- Skin and body protection : Where there is potential for skin contact, have available and wear as appropriate, impervious gloves, apron, pants, jacket, hood and boots.

Exposure Guidelines

Exposure Limit Values

Pentapotassium bis(peroxymonosulphate) bis(sulphate)

AEL * (DUPONT) 1 mg/m³ 8 & 12 hr. TWA Total dust.

Sodium hydrogencarbonate

AEL * (DUPONT) 10 mg/m³ 8 & 12 hr. TWA Total dust.

AEL * (DUPONT) 5 mg/m³ 8 & 12 hr. TWA Respirable dust.

Sulfamic acid

AEL * (DUPONT) 0.5 mg/m³ 8 & 12 hr. TWA

AEL * (DUPONT) 1.5 mg/m³ 15 minute TWA

Dipotassium peroxodisulphate

TLV (ACGIH) 0.1 mg/m³ TWA as persulfate

Potassium sulfate

AEL * (DUPONT) 10 mg/m³ 8 hr. TWA

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form : tablet
 Color : yellow
 Odor : none



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pH : 2.5 - 3.0
 Water solubility : 65 g/l at 20 °C (68 °F)

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid : Protect from moisture.

Incompatibility : Strong bases combustibles, Acids, oxidizers, Brass, Copper, Halogenated compounds, Cyanides, Heavy metal salts

Hazardous decomposition products : Sulphur dioxide , Chlorine

SECTION 11. TOXICOLOGICAL INFORMATION

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Inhalation 4 h LC50 : 3.7 mg/l , rat

Dermal LD50 : 2,200 mg/kg , rabbit

Oral LD50 : 4,123 mg/kg , rat

Skin irritation : Moderate skin irritation

Eye irritation : Risk of serious damage to eyes.

Sensitisation : Animal test did not cause sensitization by skin contact., guinea pig

Potassium peroxymonosulfate
 Repeated dose toxicity : Inhalation
 rat
 Target Organs: Eyes
 Pathologic changes, Eyes, corneal damage, Information given is based on data obtained from similar substances.

Oral - gavage
 rat
 Reduced body weight gain, Gastrointestinal effects, Information given is based on data obtained from similar substances.

Mutagenicity : Genetic damage in cultured mammalian cells was observed in some laboratory tests but not in others.
 Did not cause genetic damage in animals.
 Did not cause genetic damage in cultured bacterial cells.
 Information given is based on data obtained from similar substances.

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Teratogenicity : Animal testing showed effects on embryo-foetal development at levels equal to or above those causing maternal toxicity.
Information given is based on data obtained from similar substances.

Sodium chloride
Mutagenicity : Did not cause genetic damage in cultured bacterial cells.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Potassium peroxymonosulfate

96 h LC50

: Oncorhynchus mykiss (rainbow trout) 53 mg/l
Information given is based on data obtained from similar substances.

72 h EC50

: Pseudokirchneriella subcapitata (green algae) 0.97 mg/l
Information given is based on data obtained from similar substances.

48 h EC50

: Daphnia magna (Water flea) 3.5 mg/l
Information given is based on data obtained from similar substances.

Sulfamic acid

96 h LC50

: Pimephales promelas (fathead minnow) 14.2 mg/l

Sodium chloride

LC50

: Pimephales promelas (fathead minnow) 7,650 mg/l

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal : In accordance with local and national regulations. Do not flush into surface water or sanitary sewer system. Do not contaminate water, food or feed by disposal.

SECTION 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION

TSCA Status : On the inventory, or in compliance with the inventory



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SARA 313 Regulated Chemical(s)	:	SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
CERCLA Reportable Quantity	:	21,167 lbs Based on the percentage composition of this chemical in the product.: Sodium dodecylbenzenesulfonate
EPA Reg. No.	:	71654-6
California Prop. 65	:	Chemicals known to the State of California to cause cancer, birth defects or any other harm: none known
PA Right to Know Regulated Chemical(s)	:	Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): Sodium dodecylbenzenesulfonate, Dipotassium peroxodisulphate
NJ Right to Know Regulated Chemical(s)	:	Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): Dipotassium peroxodisulphate, Potassium hydrogensulphate

SECTION 16. OTHER INFORMATION

HMIS

Health	:	3
Flammability	:	0
Reactivity/Physical hazard	:	0
PPE	:	Personal Protection rating to be supplied by user depending on use conditions.

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Do not use for medical-clinical purposes.

Contact person : MSDS Coordinator, DuPont Chemicals and Fluoroproducts, Wilmington, DE 19898, (800) 441-7515

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,



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