

Virkon® S
Disinfectant and Virucide

BROAD SPECTRUM DISINFECTANT, FUNGICIDE & ALGAECIDE [OPT]

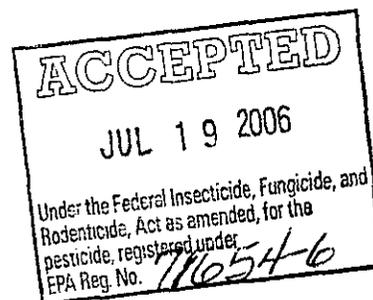
[Fragrance Free] [Reduced Dye] [Fragrance and Dye Free] {OPT}

For Use in Cleaning and Disinfecting Industrial, Animal and Agricultural Facilities
For Use in Emergency Disease Control [OPT]

Effective against
•Viruses
Including Canine Parvovirus [OPT]
•Bacteria
•Fungi

ACTIVE INGREDIENTS:

Potassium peroxymonosulfate.....	21.41%
Sodium Chloride.....	1.50%
OTHER INGREDIENTS.....	77.09%
TOTAL.....	100.00%



Equivalent to 9.75% Available Chlorine

KEEP OUT OF REACH OF CHILDREN
DANGER/PELIGRO
See Inside Booklet for Additional Precautions

POWDER FORM [OPT]

TABLET FORM [OPT]

SACHET FORM [OPT]

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EPA Reg. No. 71654-6

EPA Est. No. XXXXX-YY-ZZZ

Front Panel Continued

FIRST AID	
If in Eyes:	<ul style="list-style-type: none"> ● Hold eye open and rinse slowly and gently with water for 15-20 minutes. ● Remove contact lenses, if present after 5 minutes, then continue rinsing eye. ● Call a Poison Control Center or doctor for further treatment advice.
If on Skin or Clothing:	<ul style="list-style-type: none"> ● Take off contaminated clothing. ● Rinse skin immediately with plenty of water for 15-20 minutes. ● Call a Poison Control Center or doctor for further treatment advice.
If Swallowed:	<ul style="list-style-type: none"> ● Call Poison Control Center or doctor immediately for treatment advice. ● Have Person sip a glass of water if able to swallow. ● Do not induce vomiting unless told to do so by the poison control center or doctor ● Do not give anything by mouth to an unconscious person
HOT LINE NUMBER	
For 24-hour emergency information on this product, call 1-800-3637 (US & Canada) or 1-302-774-1100 (all other areas). Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.	

Manufactured for:
E.I. DuPont de Nemours and Company
 PO Box 80023
 Wilmington, DE 19880-0023
 Questions? Call 1 800 441-7515

US Patent No. 4822512

EFFECTIVE AGAINST THE FOLLOWING PATHOGENS:**ANIMAL AND ZOOONOTIC PATHOGENS****BACTERIA**

Actinobacillus pleuropneumoniae
 Bacillus cereus
 Brucella abortus
 Campylobacter jejuni
 Clostridium perfringens
 Dermatophilus congolensis
 Escherichia coli
 Klebsiella pneumoniae
 Mycoplasma gallisepticum
 Pasteurella multocida
 Pseudomonas aeruginosa
 Salmonella choleraesuis
 Salmonella typhimurium
 Shigella sonnei
 Staphylococcus aureus
 Staphylococcus epidermidis
 Streptococcus pyogenes
 Streptococcus suis

Not approved in California for use against the following bacteria:

Bordetella avium
 Bordetella bronchiseptica
 Fistulous withers (Poll Evil)
 Haemophilus somnus
 Helicobacter pylori
 Listeria monocytogenes
 Moraxella bovis (Pink Eye)
 Mycobacterium bovis
 Mycoplasma mycoides
 Pseudomonas mallei (Glanders)
 Pseudomonas vulgaris
 Streptococcus equi (Strangles)
 Taylorella equigenitalis
 Treponema hyodysenteriae

VIRUSES

Avian Influenza Virus
 Avian Laryngotracheitis Virus
 Bovine Adenovirus Type 4
 Canine Adenovirus (Canine Hepatitis)
 Canine Parvovirus
 Equine Herpes Virus (Type 1)
 Herpes Virus Equine (Type 3)
 Equine Influenza Virus (Type A)
 Feline Calicivirus
 Feline Panleukopenia Virus
 Feline Rhinotracheitis Virus
 Newcastle Disease Virus
 Simian virus (SV40 Virus)

Not approved in California for use against the following viruses:

Adenovirus Pneumonia
 African Horse Sickness Virus
 African Swine Fever Virus (tested with 1% soil load and 342 ppm hard water)
 Bovine Polyoma Virus
 Bovine Pseudocowpox Virus
 Bovine Viral Diarrhea Virus (no hard water)
 Calf Rotavirus (no hard water)
 Canine Coronavirus
 Canine Parainfluenza Virus
 Chicken Anemia Virus
 Coital Exanthema Virus
 Distemper Virus
 Duck Adenovirus (no hard water)
 Duck Enteritis Virus
 Egg Drop Syndrome Adenovirus
 Equine Infectious Anemia Virus (Swamp Fever)
 Equine Arteritis Virus (no hard water)

Not approved in California cont.

Hog Cholera Virus
 Equine Contagious Abortion Virus
 Equine Papillomatosis Virus
 Equine Influenza Virus (The Cough)
 Feline Herpes Virus
 Feline Infectious Peritonitis Virus
 Feline Parvovirus
 Foot and Mouth Disease Virus
 Infectious Bronchitis Virus
 Infectious Bursal Disease Virus
 Infectious Canine Hepatitis Virus
 Infectious Pancreatic Necrosis Virus
 Infectious Salmon Anaemia Virus
 Infective Bovine Rhinotracheitis Virus (no hard water)
 Leptospira Canicola Virus
 Maedi- Visna Virus
 Marek's Disease Virus
 Mouse Parvovirus
 PCV2 Virus (PMWS)
 Porcine Parvovirus
 Porcine Reproductive and Respiratory Syndrome Virus (PRRS)
 Pseudorabies Virus (Aujeszky's Disease) (no hard water)
 Rotaviral Diarrhea Virus
 Snakehead rhabdovirus
 Swine Influenza Virus
 Swine Vesicular Disease Virus
 Transmissible Gastroenteritis Virus (TGE) (no hard water)
 Turkey Herpes Virus (no hard water)
 Turkey Rhinotracheitis Virus
 Vesicular Stomatitis Virus

FUNGI

Trichophyton mentagrophytes (2%)

Candida albicans

*Not approved in California for use against
the following fungi:*

Aspergillus fumigatus

Fusarium moniliforme

Microsporum canis

Trichophyton spp. (Ringworm)

Trichophyton spp. (Mud Fever)

PLANT PATHOGENS

Not approved in California for use against plant pathogens:

Alemaria solani

Botrytis cinera

Colletotrichum coccodes

Didymella bryoniae

Fusarium oxysporum

Fusarium solani

Penicillium oxalicum

Phomopsis sclerotioides

Pyrenochaeta lycoopersici

Pythium aphanidermatium

Rhizoctonia solani

Sclerotinia sclerotiorum

Thielaviopsis basicola

Verticillium dahliae

Xanthomonas axonopodis

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

DANGER. Powder is corrosive. Causes irreversible eye damage or skin burns. Harmful if swallowed or absorbed through the skin. Do not get in eyes, on skin or on clothing. Wear goggles (or face shield). Wear protective clothing (long sleeve shirt and long pants, socks plus shoes and chemical resistant gloves such as water proof gloves). Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

Corrosive statement refers to powder only not in use solution.

ENVIRONMENTAL HAZARDS

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

BROAD SPECTRUM DISINFECTANT

Virkon[®] S is effective against numerous microorganisms affecting animals: viruses, gram positive and gram negative bacteria, fungi (molds and yeasts), and mycoplasma. Efficacy of the 1% solution against bacteria and viruses was determined in the presence of 400 ppm [200 ppm in California] AOAC hard water and 5% organic material in most cases. The exceptions are noted with qualifiers, e.g., "no hard water," "no soil load," and "use 2% solution."

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling

GENERAL INSTRUCTIONS—POULTRY AND FARM PREMISES

1. Remove all poultry or other animals and feeds from premises, trucks or other vehicles, coops, crates or other enclosures.
2. Remove all litter droppings and manure from floors, walls and surfaces of barns pens, stalls, chutes and other facilities and fixtures occupied or traversed by poultry or other animals.
3. Empty all troughs, racks, and other feeding and watering appliances.
4. Thoroughly clean all surfaces with soap or detergent and rinse with water.
5. Saturate surfaces with the recommended disinfecting solution for a period of 10 minutes.
6. Immerse all halters, ropes, and other types of equipment used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and manure.
7. Ventilate buildings, cars, boats, coops, and other closed spaces. Do not house poultry or livestock or employ equipment until treatment has been absorbed, set, or dried.
8. Thoroughly scrub treated feed racks, mangers, troughs, automatic feeders, fountains, and waterers with soap or detergent, and rinse with potable water before reuse.

Virkon® S DILUTION CHART

Fill container with desired amount of water and add Virkon® S powder or tablet(s) to achieve recommended solution concentration. [For a 1% solution, add one (1) tablet to one pint of water. OPT.] [For a 1% solution, empty one 1.3 oz. sachet into 1 gallon of water. OPT]

Powder

<i>Quantity of Water</i>	<i>0.5% Solution*</i>	<i>1% Solution</i>	<i>2% Solution</i>
<i>1 Quart</i>	<i>0.15 ounces*</i>	<i>0.3 ounces</i>	<i>0.7 ounces</i>
<i>1 Gallon</i>	<i>0.65 ounces*</i>	<i>1.3 ounces</i>	<i>2.7 ounces</i>
<i>10 Gallons</i>	<i>6.7 ounces*</i>	<i>13.4 ounces</i>	<i>26.7 ounces</i>
<i>50 Gallons</i>	<i>33.4 ounces*</i>	<i>66.8 ounces</i>	<i>133.5 ounces</i>

Measuring cup provided.

<i>Quantity of Water</i>	<i>0.5% Solution*</i>	<i>1% Solution</i>	<i>2% Solution</i>
<i>1 Pint</i>		<i>1 tablet</i>	<i>2 tablets</i>
<i>1 Quart</i>	<i>1 tablet*</i>	<i>2 tablets</i>	<i>4 tablets</i>
<i>1 Gallon</i>	<i>4 tablets*</i>	<i>8 tablets</i>	<i>16 tablets</i>

* The 0.5% solution currently is not approved for use in California.

Solutions are stable for 7 days. Do not soak metal objects in Virkon® S for long periods - 10 minutes is maximum necessary contact time. One gallon of solution is sufficient to treat 135 sq. ft. [This powder formulation is easily diluted for use in manual or machine operations. OPT.]

POULTRY PRODUCTION AND RATITE PRODUCTION

CONTROLS: Viruses of Newcastle Disease, Avian Laryngotracheitis and Avian Influenza; Bacteria of Streptococcus pyogenes, Klebsiella pneumoniae, Escherichia coli, Salmonella typhimurium, Salmonella choleraesuis, Pseudomonas aeruginosa, Staphylococcus aureus, Staphylococcus epidermidis and Mycoplasma gallisepticum. *Not approved in California for use against the following organisms:* Viruses of Infectious Bursal Disease, Infectious Bronchitis Virus, Marek's Disease, Egg Drop Syndrome, Turkey Herpes Virus, Duck Viral Enteritis; FUNGI (molds and yeasts) Aspergillus flavus, Fungi of Aspergillus fumigatus and Bacteria of Bordetella avium, Helicobacter pylori .

HATCHERIES: Virkon® S at 1% solution can be used for cleaning and disinfecting hatches, setters, evaporative coolers, humidifying systems, ceiling fans, chicken houses, transfer trucks, trays, and plastic chick boxes.

Virkon® S at 1-2% solution is recommended for use in fogging (wet misting) operations as a supplemental measure, either before or after regular cleaning and disinfecting procedures. Fog (wet mist)* until the area is moist using automatic foggers according to manufacturer's use directions.

BROILER/BREEDER HOUSES: Follow General Instructions to remove poultry and pre-clean area to be treated. Spray floors and walls with Virkon® S at 1% solution. Thoroughly wash waterers and feeders with a 1% solution of Virkon® S. After contact for 10 minutes, rinse with water. Do not house poultry or use equipment until treatment has dried.

FOR AIR SANITIZING: *Not approved for this use in California:* Use Virkon® S at 0.5-1% solution, and fog until surfaces are moist. Allow at least 2 hours before entering treated area. Rinse foggers and sprayers with water following use.

PROCESSING PLANTS: Spray Virkon® S at 1% solution to disinfect and clean walls, ceilings and floors.

SWINE PRODUCTION

CONTROLS: Bacteria of *Actinobacillus Pleuropneumoniae* and *Clostridium perfringens*; *Not approved in California for use against the following organisms:* Viruses of Hog Cholera, Swine influenza, Porcine Parvovirus, Porcine Reproductive and Respiratory Syndrome Virus (PRRS); Pseudorabies, Rotoviral Diarrhea, African Swine Fever, Fungi of *Fusarium moniliforme* Foot and Mouth Disease and Bacteria of *Treponema hyodysenteriae*.

Follow General Instructions to remove swine and preclean area to be treated. Virkon® S at 1% solution is recommended for cleaning and disinfecting farrowing units, nurseries, finisher houses, processing plants, and agricultural production equipment such as trucks, waterproof footwear (such as rubber boots), and associated livestock equipment and instruments.

Virkon® S at 0.5-1% solution is recommended for use in fogging (wet misting) operations or as a supplemental measure either before or after regular cleaning and disinfecting procedures. *Not approved in California for fogging at dilutions less than 1%.* Fog (wet mist) until the area is moist using automatic foggers according to manufacturer's use directions. Rinse foggers and sprayers with water following use.

EQUINE PRODUCTION

BROAD SPECTRUM EQUINE DISINFECTANT/DETERGENT/WASH FOR CLEANING AND DISINFECTING STABLES, EQUIPMENT, AND AERIAL DISINFECTION

CONTROLS: *Not approved in California for use against the following organisms:* Fungi of *Fusarium moniliforme*. Viruses of African Horse Sickness, Equine Viral Arteritis (Pink Eye), Coital Exanthema, Myeloencephalopathy, Rhinopneumonitis, Equine Contagious Abortion, Equine Papillomatosis, Equine Infectious anemia (Swamp Fever), Adenovirus Pneumonia, Equine Influenza (The Cough) and Rhinitis; Bacteria of Clostridial Diarrhea, Fistulous Withers (Poll Evil), *Taylorella equigenitalis*, *Bordetella bronchiseptica*, *Streptococcus equi* (Strangles) and *Pseudomonas mallei* (Glanders); Fungi of Dermatophytosis (Ringworm) and Dermatophylosis (Mud Fever).

APPLICATIONS: For cleaning and disinfecting all hard, non-porous surfaces, equipment, utensils and instruments in Veterinary practices, kennels, stables, catteries, etc.

USES: Stables, Horse Boxes, Box Stalls, Tack, Equipment, and Feed Rooms: Thoroughly clean and dry [dry clean] surfaces, then wash the area manually or with pressure washer with a 1% Virkon® S solution. Rinse with clean water.

Blankets, Saddle Pads and Rugs: *Not an approved use in California:* Shampoo by hand or spray lightly with a hand-sprayer and leave to dry. Shake or vacuum to remove residue.

Aerial Spraying to control airborne diseases: *Not an approved use in California:* Use a hand or knapsack sprayer with fine setting, or an automatic spraying system. Spray a 1% Virkon® S solution for 2-3 minutes twice daily, first thing in the morning and last thing at night. Rinse sprayers with water after use.

BOVINE PRODUCTION

CONTROLS: Bovine Adenovirus Type 4; *Not approved in California for use against the following organisms:* Bacteria of *Moraxella bovis* and *Mycobacterium bovis*; Fungi of *Fusarium moniliforme*. Viruses of Calf rotavirus, Infectious Bovine Rhinotracheitis, Pseudorabies, Foot and Mouth Disease and Bacteria of *Haemophilus somnus*.

Follow General Instructions to remove livestock and pre-clean area to be treated. A 1% solution of Virkon® S is recommended to clean and disinfect areas associated with bovine housing stabling, hospital quarantine pens, feedlot facilities, and agricultural production equipment: such as trucks, water-proof footwear (such as rubber boots), and associated livestock equipment and instruments.

COMPANION ANIMALS

CONTROLS: Viruses of Canine Parvovirus and Feline calicivirus; Bacteria of *Staphylococcus aureus*, *Streptococcus pyogenes*, *Klebsiella pneumoniae*, and *Pseudomonas aeruginosa*. *Not approved in California for use against the following organisms:* Viruses of Distemper, *Leptospira canicola*, Feline parvovirus, Feline herpes; Fungi of *Microsporum canis*.

APPLICATIONS: A 1% solution of Virkon® S is recommended as a “one step” cleaning and disinfecting procedure (Remove Gross filth and heavy soil deposits before application of the disinfecting/cleaning solution) for all surfaces, equipment, instruments, utensils and cages [caging systems] within [associated with] Veterinary Medical Hospitals, infectious disease wards, quarantine areas, Humane Society facilities, laboratory animal quarters, grooming and boarding facilities, kennels, catteries and animal transportation vehicles.

Do not immerse metal objects in Virkon® S for long periods - 10 minutes is maximum contact time.

GREENHOUSES AND HORTICULTURE

Virkon® S is intended to disinfect inanimate environmental surfaces: such as floors, walls, glasshouse structures, ventilation and other equipment, utensils, trays, and other containers, water systems, evaporative coolers, storage rooms, and vehicles in greenhouses and other horticultural settings prior to introduction or reintroduction of plants, seeds, or soil. *Not approved in California for use on ventilation and other equipment and water systems.* It is not intended to directly affect agricultural production and must not be applied to plants, seeds, or soil. If necessary, remove or cover these items prior to use of the product.

For surfaces and equipment

- 1) Sweep and remove all plant debris. Use power sprayer to wash all surfaces to remove loose dirt.
- 2) Use a dilution of 1:100 or 1.3 oz. Virkon® S per gallon of clean water. Use a dilution of 1:50 or 2.6 oz. per gallon of clean water if surfaces that are to be treated have not been pre-cleaned with water to remove organic deposits. *Not approved in California for use at 1:50 dilution on surfaces that have not been pre-cleaned with water to removed organic deposits.*

- 3) Apply solution with mop, sponge, power sprayer, or fogger to thoroughly wet all surfaces.
- 4) Heavy growth of algae or fungi may have to be scrubbed off following application.
- 5) Reapply as often as needed for control.

For clean non-porous surfaces

Pots, flats, trays: Use a dilution of 1:100 or 1.3 oz. per gallon of clean water. Soak tools to ensure complete coverage.

Work areas: Sweep and remove all plant debris. Use power sprayer to wash all surfaces to remove loose dirt. Use a dilution of 1:100 or 1.3 oz. of Virkon® S per gallon of clean water. Use a dilution of 1:50 or 2.6 oz. of Virkon® S per gallon of clean water if surfaces that are to be treated have not been pre-cleaned with water to remove organic deposits.

For evaporative coolers *Not approved use in California*:: treat existing algae and slime-contaminated surfaces with a 1:100 dilution of Virkon® S. Treat cooler water every week with a dilution of 1:200 or 0.65 oz. of Virkon® S for every gallon of cooler water.

Virkon® S may also be used to disinfect irrigation tanks and lines. *Not approved use in California*: Run a 1% solution through the system or soak equipment in a 1% solution. Let stand for ten minutes and flush system with clean water after treatment.

Virkon® S at 0.5-1% solution is recommended for use in fogging (wet misting) operations or as a supplemental measure either before or after regular cleaning and disinfecting procedures. Fog (wet mist) until the area is moist using automatic foggers according to manufacturer's use directions. Rinse foggers and sprayers with water following use.

AQUACULTURE

Not approved for this use in California

Virkon® S is intended to disinfect inanimate environmental surfaces associated with aquaculture including vehicles, nets, boots, waders, dive suits, hoses, brushes and other similar equipment. Virkon® S may also be used in foot dips. Virkon® S must not be applied directly to water.

Equipment used in separate sites, tanks, ponds in aquacultural settings should be disinfected before each new use by soaking for 20-30 minutes in a 1% Virkon® S solution followed by a water rinse.

Virkon® S at 0.5-1% solution is recommended for use in fogging (wet misting) operations or as a supplemental measure either before or after regular cleaning and disinfecting procedures. Fog (wet mist) until the area is moist using automatic foggers according to manufacturer's use directions. Rinse foggers and sprayers with water following use.

EMERGENCY DISEASE CONTROL (ANIMAL HEALTH)

Not approved for this use in California

CONTROLS: OIE List A Disease organisms including Foot and Mouth Disease Virus, African Horse Sickness Virus, Vesicular Stomatitis Virus, Classical Swine Fever Virus (Hog Cholera Virus), African Swine Fever Virus, Newcastle Disease Virus, and Highly Pathogenic Avian Influenza Virus, Swine Vesicular Disease Virus, and Mycoplasma mycoides (Contagious Bovine Pleuropneumonia). (OPT.)

A 1% solution of Virkon® S is recommended to clean and disinfect agricultural facilities and equipment, military facilities and equipment; airport facilities and equipment, port facilities and equipment, rail facilities and equipment, quarantine facilities and equipment, slaughter facilities and equipment, and other shipping facilities and equipment where animals or soils suspected of harboring foot and mouth disease virus might have been previously present.

Within these facilities, treated objects include but are not limited to vehicles, farm equipment (including tractors, ploughing shares, cars and trucks, farm engines, harvesters, loaders, mowers, tillers and slaughter machinery), military equipment (including tanks and troop carriers), and shipping equipment (pallets, bins, and containers).

Spray Virkon® S at 1% solution to disinfect and clean walls, ceilings, floors, decks, container surfaces, vehicles, wheels, water proof footwear (such as rubber boots), livestock equipment, utensils and instruments.

Do not immerse metal objects in Virkon® S for long periods - 10 minutes is maximum contact time.

DISINFECTION LIMITED TO SPECIFIC AND KNOWN DISEASE ORGANISMS

Not approved for this use in California

The instructions above call for use of a 1% solution for general disinfection, however, Virkon® S is effective against the following disease organisms at the dilution rates specified below. If the threat is known and limited to one of the organisms below, Virkon® S may be used at the following dilution rates:

Disease Organism	Dilution rate	Oz./Gal.
PCV2 Virus (PMWS)	1:200	0.7

USES IN FACILITIES USED FOR TEMPORARY CONFINEMENT OF ANIMALS

A 1% solution of Virkon® S is recommended to clean and disinfect inanimate surfaces associated with facilities used for the temporary confinement of animals. Sites may include, but are not limited to, barns, sheds, stables, pens, cages, and associated access alleys or walkways. Virkon® S may also be used to clean and disinfect equipment related to the maintenance of animals found at fairs, exhibitions, animal auction yards, animal show/boarding facilities, or other similar agricultural facilities designed for the temporary housing of animals.

To ensure that Virkon® S does not come in direct contact with animals, feed, or water, remove animals from treatment site and either remove or cover feed and water apparatus. To ensure precise application on inanimate surfaces, Virkon® S may only be applied using hand-held sprayers, sponges on other absorbent materials. Do not allow Virkon® S to pool on surfaces that may be within reach of animals. Do not allow Virkon® S to come into direct contact with people. Allow Virkon® S to completely dry prior to housing animals, using equipment, or allowing people to contact treated sites.

STORAGE AND DISPOSAL

STORAGE: Store in a cool, dry place in tightly closed container away from children. Always replace lid after use.

DISPOSAL: Wash empty container thoroughly and dispose in trash. Do not mix this product with other chemicals.