

71654-6

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 15 2010

Ms. Susan M. Schaner
E.I. du Pont de Nemours and Company
DuPont Chemical Solutions Enterprise
P.O. Box 80402 (E403-3224D)
Wilmington, DE 19880-0402

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Subject: **Virkon® S**
EPA Registration Number: 71654-6
Application Date: April 13, 2010
Receipt Date: April 16, 2010

Dear Ms. Schaner:

The following amendment, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide (FIFRA), as amended, is acceptable with conditions.

Proposed Amendment

- Label Amendment: Adding Clarifying Language

Conditions

Revise the label as follows:

- 1.) The organism being mitigated by this product is *Brucella abortus*, a bacteria. Revise the nomenclature for *Brucella abortus* on page 10 by deleting the phrase, "bacteria of."
- 2.) PRN 2005-1, Guidance for Mandatory and Advisory Labeling Statements, states that: "Mandatory statements, which commonly use imperative verbs such as "must" or "shall", either require action or prohibit the user from taking certain action. Advisory statements generally provide information, either in support of the mandatory statements or about the product in general. To ensure that the intent of each labeling statement is clear, mandatory statements need to be clearly distinguishable from advisory statements." Therefore, revise the "Directions for Use" on pages 10 thru 14 by deleting the terms, "recommended" and "should." Replace "should" with "must."
- 3.) The product must support clear instructions on how to utilize this product as a fogger in hatcheries and animal housing facilities by stating the following:

All surfaces must be cleaned and disinfected in accordance with label directions prior to fogging. Fogging is an adjunct or supplement to normal cleaning and disinfection procedures and practices.

Follow General Instructions to remove poultry and/or animals from room to be treated. Close room off, so fog is confined to room to be treated. Apply Vircon S at dilution rate of 1:200 (0.5%) at an application of 1 gallon per 430 ft² of floor space. Use a mechanical or plumbed in misting system designed for water.

CONCURRENCES

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based applications with a droplet size of greater than 50 microns, or a pressure washer/knapsack or tank sprayer to deliver fine mist. Insert the nozzle of the fogging device through a suitable opening in the room. Do not allow people to breathe or contact the fog or to enter the room until the fog has completely settled or exhausted. Do not house animals or use equipment until treatment has dried. Rinse waterers and feeders with potable water before reuse.

Note: Individuals must avoid entering the building or room during fogging. If the building or room must be entered, then individuals entering must wear a self-contained respirator approved by NIOSH/MSHA, goggles, long shirt sleeves, and pants.

4.) Delete directions for "Air Sanitizing" and "Aerial Spraying to control airborne diseases" on pages 8 and 10 because there is no data on file to support this claim. If you would like to make this claim, you must submit efficacy data in accordance with DIS/TSS before a product may make this claim on the label.

5.) The Directions on pages 8 -13 except the "Broiler/Breeder Houses" and "Greenhouses and Horticulture" directions are incomplete because they do not indicate how to apply the use solution, the contact time, or to allow the treated surfaces to air dry or rinse with potable water. Therefore, add the following statements to each direction: *Saturate surfaces with 1% solutions of Vircon with cloth, mop, mechanical spray, or sponge for period of 10 minutes. Allow surfaces to air dry. Rinse waterers and feeders with potable water before reuse.*

6.) Qualify "infectious disease wards" on page 10 as being limited to animal facilities by stating "animal infectious disease wards."

7.) Revise the phrase, "disease organisms" on page 13 by deleting the term, "disease." The intent of this product is to mitigate microorganisms on hard nonporous surfaces not to protect or prevent animal infections. The use of the term, disease, implies that the product is protecting the animals from contracting a disease which is false and misleading.

8.) The "Storage and Disposal" statements on page 13 must be revised in compliance with the Container Rule and PR Notice 83-3 by stating the following:

Storage and Disposal

Do not contaminate food, feed, or water by storage and disposal.

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

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticides solutions or rinsate is a violation of Federal law. If these wastes cannot be disposed of according to use instructions on the label, contact your State Pesticides or Environment Control Agency, or the Hazardous Waste Representative at an EPA regional office for guidance.

Container Disposal: Nonrefillable container. Do not refill or reuse this container. Triple rinse as follows: Fill container ¼ full with water and recap. Shake for 10 seconds. Drain for 10 seconds after the flow begins to drip. Follow Pesticide Disposal instructions for rinsate disposal Repeat procedure two more times. Then, offer for recycling or reconditioning, if available. If not, dispose of container in a sanitary landfill.

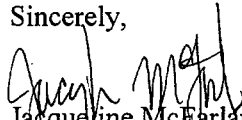
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General Comments

A stamped label with conditions is enclosed for your records. Submit a copy of your final printed label before distributing or selling the product bearing the revised labeling.

If you have further questions concerning this letter, then please contact me by telephone at (703) 308-6416 or by e-mail at campbell-mcfarlane.jacqueline@epa.gov or Stacey Grigsby by telephone at (703) 308-6440 or by email at grigsby.stacey@epa.gov. When you are submitting information or data in response to this letter, send a copy of this letter to accompany the submission in order to facilitate processing.

Sincerely,



Jacqueline McFarlane
Product Manager 34
Regulatory Management Branch II
Antimicrobials Division (7510P)

Enclosure: Stamped label

CONCURRENCES

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2/2

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

ACCEPTED
with **COMMENTS**
in EPA Letter Dated:

JUL 15 2010
Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No. **71654-6**

ACTIVE INGREDIENTS:

Potassium peroxymonosulfate.....	21.41%
Sodium Chloride.....	1.50%
OTHER INGREDIENTS.....	<u>77.09%</u>
TOTAL.....	100.00%

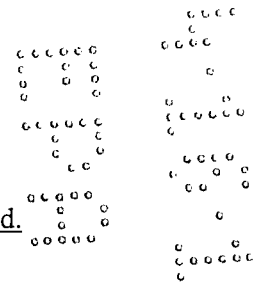
Equivalent to 9.75% Available Chlorine

<p>KEEP OUT OF REACH OF CHILDREN</p> <p>DANGER/PELIGRO</p> <p>See Inside Booklet for Additional Precautions [OPT]</p> <p>See leaflet for additional directions for use [OPT]</p>
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POWDER FORM [OPT]

TABLET FORM [OPT]

SACHET FORM [OPT]



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Virkon® S is a registered trademark of and manufactured by Antec International Ltd., a DuPont Company

EPA Reg. No. 71654-6

EPA Est. No. XXXXX-YY-ZZZ

<Lot or batch #>

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 a 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 1-800-441-3637 (US & Canada) or 1-302-774-1139 (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
 Outside the US, contact: 1-302-774-1000

US Patent No. 4822512

EFFECTIVE AGAINST THE FOLLOWING PATHOGENS:**ANIMAL AND ZONOTIC 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 enterica
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)
Mycoplasma hyopneumonia
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)
 Equine Herpes Virus (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.

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
 Hog Cholera 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%)

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:

Alternaria solani	Pyrenochaeta lycoopersici
Botrytis cinera	Pythium aphanidermatium
Colletotrichum coccodes	Rhizoctonia solani
Didymella bryoniae	Sclerotinia sclerotiorum
Fusarium oxysporum	Thielaviopsis basicola
Fusarium solani	Verticillium dahliae
Penicillium oxalicum	Xanthomonas axonopodis
Phomopsis sclerotioides	

**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-diluted 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 – *Not Approved for this use in California*), 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.”

Respiratory illnesses attributable to Pandemic 2009 H1N1 are caused by influenza A virus. Virkon® S [OPT] [Product Name] is a broad-spectrum hard surface disinfectant that has been shown to be effective against (influenza A virus tested and listed on the label) and is expected to inactivate all influenza A viruses including Pandemic 2009 H1N1 (formerly called swine flu). [OPT]

This product has demonstrated effectiveness against influenza A virus and is expected to inactivate all influenza A viruses including Pandemic 2009 H1N1 influenza A virus [OPT]

This product has demonstrated effectiveness against (influenza A virus tested and listed on the label) and is expected to inactivate all influenza A viruses including Pandemic 2009 H1N1 (formerly called swine flu). [OPT]

Kills Pandemic 2009 H1N1 influenza A virus (formerly called swine flu). [OPT]

Kills Pandemic 2009 H1N1 influenza A virus. [OPT]

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

Quantity of Water	0.5% Solution*	1% Solution	2% Solution
<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.

Tablet

Quantity of Water	0.5% Solution*	1% Solution	2% Solution
<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>

Sachet

Quantity of Water	0.5% Solution*	1% Solution	2% Solution
<i>1 gallon</i>	-	<i>1 Sachet</i>	<i>2 Sachets</i>
<i>2 Gallons</i>	<i>1 Sachet</i>	<i>2 Sachets</i>	<i>4 Sachets</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 enterica*, *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 – *Not Approved for this use in California*) *Aspergillus flavus*, Fungi of *Aspergillus fumigatus* and Bacteria of *Bordetella avium*, *Helicobacter pylori*.

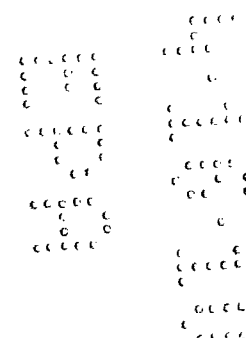
HATCHERIES: Virkon® S at 1% solution can be used for cleaning and disinfecting hatcher, setters, evaporative coolers, humidifying systems, ceiling fans, chicken houses, transfer trucks, trays, and plastic chick boxes.

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*; Fungi of *Trichophyton mentragrophytes* (2%). *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: Viruses of Equine herpes virus Type 1 and Type 3 and Equine Influenza. Bacteria of *Brucella abortus*, *Clostridium perfringens*, *Dermatophilus congolensis* (at 2%), *Pseudomonas aeruginosa*, *Salmonella typhimurium* and *Staphylococcus aureus*. Fungi of *Trichophyton mentragrophytes* (at 2%). *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; Fungi of Trichophyton mentragrophytes(2%). *Not approved in California for use against the following organisms:* Bacteria of Moraxella bovis and 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 preclean 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. Fungi of Trichophyton mentragrophytes(2%). *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 or 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

PESTICIDE STORAGE:

For pails, [jugs], [bottles]: Store in a cool dry place in tightly closed container. Keep out of reach of children. Always replace lid after use. [Retain dessicant canister with product during storage.] Do not mix this product with other chemicals.

For [sachet] [pouch] [packet] [bag]: Store in a cool dry place. Keep out of reach of children. [Retain dessicant canister with product during storage.] Do not mix this product with other chemicals.

For spray bottle with in-use solution: Store in a cool dry place. Keep out of reach of children. Do not mix this product with other chemicals.]

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container.

[Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment.] Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.