

# C 12/2/2009

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### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

DEC 2 2009

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Thomas C. McEntee
Product Registration Manager
E.I.du Pont de Nemours and Company
DuPont Chemical Solutions Enterprise
Experimental Station (ESL402/3224A)
P.O. Box 80402
Wilmington, DE 19880-0402

FILE COPY

Subject:

Notification Application per PR Notice 95-2

Virkon® S

EPA Registration Number: 71654-6 Application Date: November 11, 2009 Receipt Date: November 12, 2009

Dear Mr. McEntee:

This will acknowledge receipt of your notification, submitted under the provisions of PR Notice 95-2.

#### **Proposed Notification:**

Addition of Influenza A virus (H1N1) label claim

#### **General Comment:**

Based on a review of the material submitted, the following comment applies:

The notification is acceptable.

Should you have any questions concerning this letter, please contact Heather Garvie at (703) 308-0034 or by email address at <a href="mailto:garvie.heather@epa.gov">garvie.heather@epa.gov</a>.

Sincerely,

ShaRon Carlisle

(Acting) Product Manager 34

Regulatory Management Branch II Antimicrobials Division (7510P)

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|                | OMB No. 2070-0060 |
|----------------|-------------------|
| Form Approved. | OMB No. 2070-0060 |

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#### **United States**

|          | Registration |
|----------|--------------|
|          | Amendmen     |
| <b>(</b> | Other        |

OPP Identifier Number

| <b>\$EPA</b>   | Environmental Protect Washington, DC 20   |  | Amenda<br>× Other   | nent  |
|--|---|--|---|---|
|  | Applicat  | ion for Pesticide - S  | ection I  |   |
| 1. Company/Product Numb<br>71654-6   | or  | 2. EPA Product<br>Sharon Carlisle  | •   | 3. Proposed Classification  X None Restricted                   |
| 4. Company/Product (Name<br>Virkon(R) S  | )   | PM#<br>34  |   |   |
| 5. Name and Address of Ap<br>E.I. du Pont de Nemours and<br>Dupont Chemical Solutions E<br>Experimental Station (ESL 40<br>Wilmington, DE 19880-0402 | Company<br>nterprise, P. O. Box 80402   | (b)(i), my produ<br>to:  | uct is similar or identi  | nce with FIFRA Section 3(c)(3) ical in composition and labeling |
| Check if thi   | s is a new address  | Product Nam  | ne  |   |
|  |   | Section - II   |   |   |
| Amendment - Explain Resubmission in res  X Notification - Explain  | ponse to Agency letter dated  | Agency "Me To  | rinted lebels in repsonse<br>/ letter deted<br>po" Application.<br>Explain below. | to .  |
|  |   |  |   |   |
| Notification - Label claims in ac<br>This notification is consistent w<br>confidential statement of formu  | ent with the terms of PR Notice 98-19 and   | uenza Policy October 21, 2009. I<br>EPA regulation sat 40 CFR 152.4<br>a violation of 18 USC Sec. 1001 t<br>I 40 CFR 152.46, this product ma | 46, and no other changes ho willfully make any false si                           | 5   |
|  |   | Section - III  |   |   |
| 1: Material This Product Wi  | li Be Packaged In:  |  |   |   |
| Child-Resistant Packaging Yes X No * Certification must be submitted   | Unit Packaging  X Yes  No  If "Yes"  Unit Packaging wgt.  No. per Container                   | Water Soluble Peckaging Yes No No No.     Package wgt cont.  | X   | Container    Metal   Plastic   Glass   Paper   Other (Specify)  |
|  | Información de Circle D   | etail Container  | 5. Location of Lab  | at Oise Africa  |
| 3. Location of Net Contents  X Label   |   | o., 9 oz. , 1.3 oz.  | EX  | ei Directions   |
| 6. Manner in Which Label is  | Affixed to Product X Pape<br>Sten   | graph (  | Other   |   |
|  |   | Section - IV   | M   |   |
| 1. Contact Point   | items directly below for identificet  | ion of individual to be contac   | ted, if necessery, to pro   | ocess this application.)  |
| Name<br>Thomas C. McE  | ntee  | Titte<br>Product Registratio   | on Manager  | Telephone No. (Include Area Code)<br>302 695 6856               |
|  | Certific<br>ments I have made on this form an<br>ry knowlinglly false or misleading s<br>law. | d all attachments thereto are  |   |   |
| 2. Signature   | a relu  | 3. Title<br>Product Regis  | stration Man  |   |
| 4. Typed Name  |   | 5. Date  |   | CC 0 C C C C C C C C C C C C C C C C C                          |
| Thomas C. McEntee  |   | November 1   | 1, 2009   | 0000  |

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DuPont Chemical Solutions Enterprise P. O. Box 80402 Wilmington, DE 19880-0402



#### **DuPont Chemical Solutions Enterprise**

November 11, 2009

Document Processing Desk Antimicrobials Division (7510P) US Environmental Protection Agency Office of Pesticide Programs; Room S-4900 Ms. Sharon Carlisle (PM34) 2777 South Crystal Drive Arlington, VA 22202-4501

Subject: Virkon® S; EPA Registration No. 71654-6

Notification per Pandemic 2009 H1N1 Influenza Policy

Dear Ms. Carlisle,

Please consider this letter and its attachments as a notification to revise the subject registration to include a claim for efficacy against Swine Influenza A (H1N1) Virus.

Should you have any questions, feel free to call or e-mail.

Sincerely,

Thomas C. McEntee

**Product Registration Manager** 

Thomas.C.McEntee@usa.dupont.com

Tome ( ) n. Etu

(302) 695-6856

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### Virkon® S Disinfectant and Virucide

### BROAD SPECTRUM DISINIFECTANT, 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

NOTIFICATION
Date Reviewed: 12/2/09
Reviewed By: 12/2/09

**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

### DANGER/PELIGRO

See Inside Booklet for Additional Precautions

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

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#### Front Panel Continued

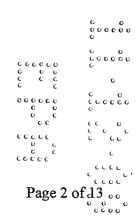
| FIRST AID               |  |  |  |
|-------------------------|--|--|--|
| If in Eyes:             | <ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present after 5 minutes, then continue rinsing eye.</li> <li>Call a Poison Control Center or doctor for further treatment advice.</li> </ul>   |  |  |
| If on Skin or Clothing: | <ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a Poison Control Center or doctor for further treatment advice.</li> </ul>  |  |  |
| If Swallowed:           | <ul> <li>Call Poison Control Center or doctor immediately for treatment advice.</li> <li>Have Person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by the poison control center or doctor</li> <li>Do not give anything by mouth to an unconscious person</li> </ul> |  |  |

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 ZOONOTIC 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)

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) 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 Exantherma 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 (Aujesky'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

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#### **FUNGI**

Trichophyton mentagropphytes (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:

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."

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]

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#### **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<br>Water | 0.5% Solution* | 1% Solution | 2% Solution  |
|----------------------|----------------|-------------|--------------|
| 1 Quart              | 0.15 ounces*   | 0.3 ounces  | 0.7 ounces   |
| 1 Gallon             | 0.65 ounces*   | 1.3 ounces  | 2.7 ounces   |
| 10 Gallons           | 6.7 ounces*    | 13.4 ounces | 26.7 ounces  |
| 50 Gallons           | 33.4 ounces*   | 66.8 ounces | 133.5 ounces |

Measuring cup provided.

| Quantity of<br>Water | 0.5% Solution* | 1% Solution | 2% Solution     |
|----------------------|----------------|-------------|-----------------|
| 1 Pint               |                | 1 tablet    | 2 tabléts       |
| 1 Quart              | 1 tablet*      | 2 tablets   | 4 Lablets       |
| 1 Gallon             | 4 tablets*     | 8 tablets   | 16 tablets (' c |

<sup>\*</sup> The 0.5% solution currently is not approved for use in California.

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#### Sachet

| Quantity of Water | 0.5% Solution* | 1% Solution | 2% Solution |
|-------------------|----------------|-------------|-------------|
| 1 gallon          | -              | 1 Sachet    | 2 Sachets   |
| 2 Gallons         | 1 Sachet       | 2 Sachets   | 4 Sachets   |

<sup>\*</sup> The 0.5% solution is currently 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 chloeraesuis, 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 hatchers, 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 preclean 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.

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#### 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 Exantherma, 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 california: Use a hand or california 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 call the sprayers with water after use.

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#### **BOVINE PRODUCTION**

CONTROLS: Bovine Adenovirus Type 4; 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<sup>®</sup> 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, infections 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-eleaned with water to remove organic deposits. Not approved in California for use at 1:50 dilution of surfaces that have not been pre-cleaned with water to removed organic deposits.

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- 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.

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#### **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 <u>not</u> 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

**PESTICIDE STORAGE** Store out of reach of children.

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

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