

71654-6

5/21/2010

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

MAY 21 2010

**E COPY**

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Susan M. Schaner  
**Du Pont Chemicals and Fluoroproducts**  
P.O. Box 80402  
Wilmington, DE 19880-0402

Subject: **Virkon® S**  
EPA Registration No.: 71654-6  
Application Date: April 12, 2010  
Receipt Date: April 21, 2010

Dear Ms. Schaner:

This acknowledges receipt of your notification, submitted under the provision of PR Notice 98-10, FIFRA section 3(c) 9.

**Proposed Notification:**

- Updating Storage and Disposal Update PR Notice 2007-4
- Update Directions for Use

**General Comment:**

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

A copy of the accepted notification has been inserted in your file for future reference.

Should you have any questions or comments concerning this letter, you may contact me by telephone at (703) 308-6416 or by e-mail at [campbell-mcfarlane.jacqueline@epa.gov](mailto:campbell-mcfarlane.jacqueline@epa.gov) or Stacey Grigsby by telephone at (703) 305-6440 or by e-mail at [grigsby.stacey@epa.gov](mailto:grigsby.stacey@epa.gov) during the hours of 8:00am to 4:00pm EST. When submitting information or data in response to this letter, a copy of this letter should accompany the submission to facilitate processing.

Sincerely,

A handwritten signature in cursive script that reads "Jacqueline McFarlane".

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

 <b>EPA</b> United States <b>Environmental Protection Agency</b> Washington, DC 20460	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> <b>Other: Notification</b>	OPP Identifier Number
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**Application for Pesticide - Section I**

1. Company/Product Number <b>71654-6</b>	2. EPA Product Manager <b>Jacqueline McFarlane (acting)</b>	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) <b>Virkon S</b>	PM# <b>Team 34</b>	
5. Name and Address of Applicant (Include ZIP Code) <b>E.I. du Pont de Nemours and Company DuPont Chemical Solutions Enterprise P.O. Box 80402 (E403-3224D) Wilmington, DE 19880-0402 Attn: Susan M. Schaner</b>		6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3)(b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. _____  Product Name _____

Check if this is a new address

**Section - II**

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.)

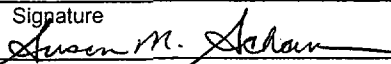
This notification is to correct the master label posted on the PPLS website.

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formulas for the product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

**Section - III**

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	<input type="checkbox"/> Plastic
*Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt.	No. per container
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product	
6. Manner in Which Label is Affixed to Product			<input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other _____		

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)		
Name <b>Susan M. Schaner</b>	Title <b>Regulatory Coordinator</b>	Telephone No. (Include Area Code) <b>(302) 695-2328</b>
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received <b>(Stamped)</b>
2. Signature 	3. Title <b>Regulatory Coordinator</b>	
4. Typed Name <b>Susan M. Schaner</b>	5. Date <b>09-Apr-2010</b>	

30

30417



DuPont Chemicals and Fluoroproducts  
P. O. Box 80402  
Wilmington, DE 19880-0402

DuPont Chemicals and Fluoroproducts

April 13, 2010

Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
Jacqueline McFarlane (PM34)  
2777 South Crystal Drive  
Arlington, VA 22202-4501

**SUBJECT: Virkon® S, EPA Registration #: 71654-6  
Notification to correct the master label on PPLS Website**

Dear Ms. McFarlane,

It has come to our attention that the label posted on the PPLS website for the above referenced product related to the PR 2007-4 notification is incorrect. The posted label is from a submission that received pin-punch May 20, 2008. The May 2008 submission did not contain upgraded container disposal language and has directions for use which have not been accepted to date.

Please consider this letter and its attachments as a notification to correct the master label for the above referenced product. The attached label also incorporates the revision required by your July 1, 2009 Accepted with Comments letter.

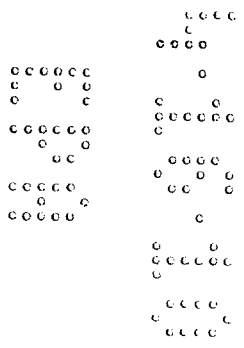
Please refer to the attached:

- Completed application for Pesticide Registration (EPA form 8570-1) – dated April 9, 2010
- Two copies of the master label (one with corrections highlighted) (14 pages ea)
- One copy of label posted on PPLS Website – dated July 1, 2009 (16 pages)
- One CD with Master e-label, 071654.00006.20100409.MasterVirkonS.Corrected.pdf

Should you have any questions, please feel free to call me at (302)695-2328 or email [susan.m.schaner@usa.dupont.com](mailto:susan.m.schaner@usa.dupont.com).

Sincerely,

Susan M. Schaner  
Regulatory Coordinator  
DuPont Chemicals and Fluoroproducts



**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.....	<u>77.09%</u>
TOTAL.....	100.00%

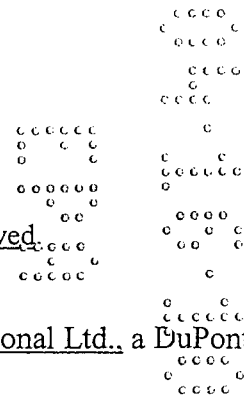
Equivalent to 9.75% Available Chlorine

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

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

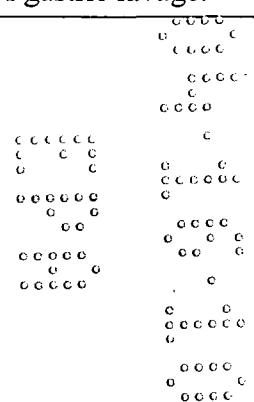
EPA Est. No. XXXXX-YY-ZZZ

<Lot or batch #>

Front Panel Continued

<b>FIRST AID</b>	
<b>If in Eyes:</b>	<ul style="list-style-type: none"> <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>
<b>If on Skin or Clothing:</b>	<ul style="list-style-type: none"> <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>
<b>If Swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a 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>
<b>HOT LINE NUMBER</b>	
<p>For 24-hour emergency information on this product, call 1-800-441-3637 (US &amp; 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.</p>	
<p><b>Note to Physician:</b> Probable mucosal damage may contraindicate the use of gastric lavage.</p>	

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:**

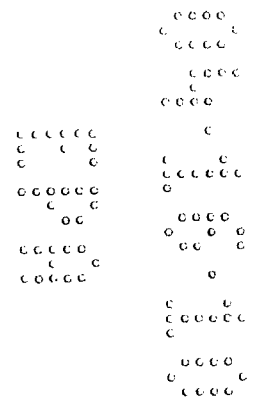
**ANIMAL AND ZONOTIC PATHOGENS**

**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%)

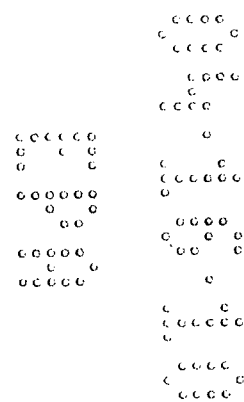
*Not approved in California for use against the following fungi:*

- 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]

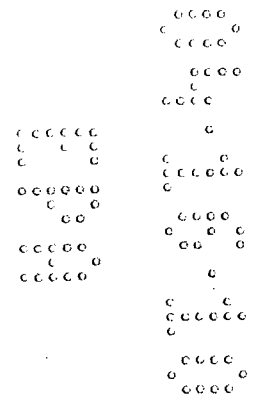
Kills Pandemic 2009 H1N1 influenza A virus. [OPT]

**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**

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

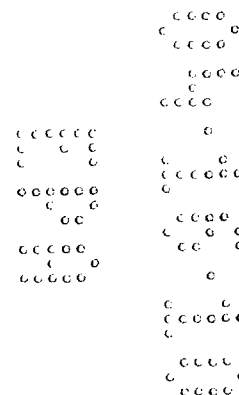
<b>Quantity of Water</b>	<b>0.5% Solution*</b>	<b>1% Solution</b>	<b>2% Solution</b>
<i>1 Pint</i>		<i>1 tablet</i>	<i>2 tablets</i>
<i>1 Quart</i>	<i>1 tablet*</i>	<i>2 tablets</i>	<i>4 tablets</i>
<i>1 Gallon</i>	<i>4 tablets*</i>	<i>8 tablets</i>	<i>16 tablets</i>

**Sachet**

<b>Quantity of Water</b>	<b>0.5% Solution*</b>	<b>1% Solution</b>	<b>2% Solution</b>
<i>1 gallon</i>	<i>-</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.

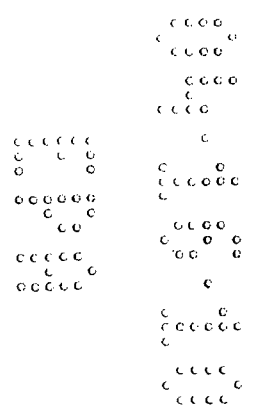
HATCHERIES: Virkon® S at 1% solution can be used for cleaning and disinfecting hatcher, setters, evaporative coolers, humidifying systems, ceiling fans, chicken houses, transfer trucks, trays, and plastic chick boxes.

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*. *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 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 *Microsporium 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 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 sprav 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.