

Virkon™ S Tablets (LANXESS CORPORATION)

Label

Use/Dose

LANXESS CORPORATION
Product Safety & Regulatory Affairs
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VIRKON™ S TABLETS

Lanxess

Disinfectant

Disinfectant and Virucide*

For Use in Cleaning and Disinfecting Industrial, Animal and Agricultural Facilities

Tablet form

Effective against Viruses*, Bacteria, Fungi

ACTIVE INGREDIENTS

Potassium peroxymonosulfate	21.41%
Sodium chloride	1.50%
OTHER INGREDIENTS	77.09%
Total	100.00%

Equivalent to 9.75% Available Chlorine

FIRST AID

IF IN EYES: 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: 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: 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 866-673-6350.

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.

KEEP OUT OF REACH OF CHILDREN

DANGER/PELIGRO

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 and mycoplasma (spp. gallisepticum & hyopneumonia).

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," "1% soil load," and "use 2% solution". Refer to Pathogen list for specific contact times and dilution rates.

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*.

STORAGE AND DISPOSAL:

Do not contaminate water, food, or feed by 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 desiccant 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 desiccant 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.

PESTICIDE DISPOSAL: Pesticide wastes may be hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

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 1/4 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.

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

Actinobacillus pleuropneumoniae

Bacillus cereus

Brucella abortus

Campylobacter jejuni

Clostridium perfringens

Dermatophilus congolensis (2%)

Escherichia coli

Klebsiella pneumoniae

Mycoplasma gallisepticum

Mycoplasma hyopneumoniae

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

Leptospira canicola

Listeria monocytogenes

Moraxella bovis (Pink Eye)

Mycoplasma mycoides

Pseudomonas mallei (Glanders)

Proteus vulgaris

Streptococcus equi (Strangles)

Taylorella equigenitalis

Treponema hyodysenteriae

VIRUSES*

Avian Influenza Virus

Avian Infectious Laryngotracheitis Virus (ILT)

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

Foot and Mouth Disease 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)

Avian Adenovirus (Type 2)

Avian Reovirus

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)

Equine Contagious Abortion Virus

Equine Papillomatosis Virus

Equine Influenza Virus (The Cough)

Feline Herpes Virus

Feline Infectious Peritonitis Virus

Feline Parvovirus

Hog Cholera Virus

Infectious Bronchitis Virus

Infectious Bursal Disease Virus

Infectious Canine Hepatitis Virus

Infective Bovine Rhinotracheitis Virus (no hard water)

Maedi-Visna Virus

Marek's Disease Virus

Mouse Parvovirus

PCV2 Virus (PMWS)

Porcine Epidemic Diarrhea Virus (PEDv)

Porcine Parvovirus

Porcine Reproductive and Respiratory Syndrome Virus (PRRS)

Porcine Rotavirus

Pseudorabies Virus (Aujeszky's Disease) (no hard water)

Rotaviral Diarrhea Virus

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 interdigitale (2%)

Not approved in California for use against the following fungi:

Aspergillus flavus

Aspergillus fumigatus

Fusarium moniliforme

Microsporium canis

PLANT PATHOGENS

Not approved in California for use against plant pathogens:

Alternaria solani

Botrytis cinera

Colletotrichum coccodes

Didymella bryoniae

Fusarium oxysporum

Fusarium solani

Penicillium oxalicum

Phomopsis sclerotoides

Pyrenochaeta lycoopersici

Pythium aphanidermatum

Rhizoctonia solani

Sclerotinia sclerotiorum

Thielaviopsis basicola

Verticillium dahliae

Xanthomonas axonopodis

Virkon™ S DILUTION CHART

To achieve the appropriate use-diluted Virkon™ S concentration, fill container with the volume of water and quantity of powder or tablet(s) found in the following table.

For a 1% solution, add one (1) tablet to one pint of water.

For a 1% solution, empty one 1.3 oz. sachet into 1 gallon of water.

Solutions are stable for 7 days. Do not soak metal objects in Virkon™ S for long periods - Refer to Pathogen list for specific contact times and exceptions. One gallon of solution is sufficient to treat 135 square feet.

Quantity of Water	0.5% Solution††	1% Solution	2% Solution
1 Gallon		1 Sachet	2 Sachets
2 Gallons	1 Sachet	2 Sachets	4 Sachets

Quantity of Water	0.5% Solution††	1% Solution	2% Solution
1 Pint		1 Tablet	2 Tablets
1 Quart	1 Tablet	2 Tablets	4 Tablets
1 Gallon	4 Tablets	8 Tablets	16 Tablets

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

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, stall, 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 use-diluted disinfecting solution for a period of 10 minutes. Refer to the Pathogen List for specific contact times and dilution rates.
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.

BOOT DISINFECTION

Virkon™ S at a 1% solution can be used for cleaning and disinfecting boots**.

Boot bath and tray

Place boot bath or tray at entrances to reduce cross contamination on treated surfaces in poultry and farm premises, livestock facilities and stalls, and animal containment areas.

1. Make a 1% solution of Virkon™ S by filling a suitable container with water and Virkon™ S according to the dilution table. Stir thoroughly until fully dissolved. Change the solution every 2 to 3 days or when it becomes visibly soiled.
2. Before application of Virkon™ S solution, rinse or brush footwear surfaces including soles to remove visible filth and heavy soil deposits.
3. Step into the container with boots on and use a clean brush to clean boots with disinfectant solution.
4. Wash boots thoroughly paying close attention to the soles. Surface contact time is 10 minutes.

**-Virkon™ S should only be used on water proof or non-porous footwear. Do not use on footwear that is damaged or permeable by water.

POULTRY PRODUCTION AND RATITE PRODUCTION CONTROLS: Viruses of Newcastle Disease, Avian Infectious Laryngotracheitis virus and Avian Influenza virus; 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 Avian Adenovirus Type 2, Infectious Bursal Disease, Infectious Bronchitis Virus, Marek's Disease virus, Egg Drop Syndrome, Turkey Herpes Virus, Duck Viral Enteritis; FUNGI, *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. Saturate hard, non-porous surfaces with a 1% solution of Virkon™ S with a cloth, mop, mechanical spray, or sponge for a period of 10 minutes.

Allow surfaces to air dry. Rinse waterers and feeders with potable water before reuse.

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. Treated surfaces should remain visibly wet for duration of specified contact time. Thoroughly wash waterers and feeders with a 1% solution of Virkon™ S. After contact for 10 minutes, rinse with potable water. Do not house poultry or use equipment until treatment has dried.

PROCESSING PLANTS: Spray Virkon™ S at 1% solution to disinfect and clean walls, ceilings and floors. Saturate hard, non-porous surfaces for a period of 10 minutes. Allow surfaces to air dry.

SWINE PRODUCTION

CONTROLS: Bacteria of; *Actinobacillus Pleuropneumoniae* and *Clostridium perfringens*; Foot and Mouth Disease virus, Fungi of *Trichophyton interdigitale* (2%).

Not approved in California for use against the following organisms: Viruses of Hog Cholera, Swine influenza virus, Porcine Epidemic Diarrhea Virus (PEDv), Porcine Parvovirus, Porcine Reproductive and Respiratory Syndrome Virus (PRRS); Porcine Rotavirus, Pseudorabies virus, Rotaviral Diarrhea Virus, African Swine Fever virus, Fungi of *Fusarium moniliforme*, and Bacteria of *Treponema hyodysenteriae*.

Follow General Instructions to remove swine and preclean area to be treated. Use a 1% solution of Virkon™ S 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. Saturate surfaces with a 1% solution of Virkon™ S with a cloth, mop, mechanical spray, or sponge for a period of 10 minutes. Allow surfaces to air dry. Rinse waterers and feeders with potable water before reuse.

EQUINE PRODUCTION

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

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 interdigitale* (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).

APPLICATIONS: For cleaning and disinfecting 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: Follow general instructions to remove animals from area to be treated. Thoroughly clean and dry [dry clean] surfaces, then wash the area manually or with pressure washer with a 1% Virkon™ S solution, saturating surfaces for a period of 10 minutes. Allow surfaces to air dry. Rinse waterers and feeders with potable water before reuse.

To Clean Blankets, Saddle Pads and Rugs:

Not an approved use in California: Using a 1% solution of Virkon™ S, shampoo by hand or spray lightly with a hand-sprayer and leave to dry. Shake or vacuum to remove residue.

BOVINE PRODUCTION

CONTROLS: Bovine Adenovirus Type 4, Foot and Mouth Disease virus; Fungi of *Trichophyton interdigitale* (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, and Bacteria of *Haemophilus somnus*.

Follow General Instructions to remove livestock and pre-clean area to be treated. Use a 1% solution of Virkon™ S to clean and disinfect areas associated with bovine housing stabling, hospital quarantine pens, feedlot facilities, and agricultural production equipment: such as trucks, waterproof footwear (such as rubber boots), and associated livestock equipment and instruments. Saturate surfaces with a 1% solution of Virkon™ S with a cloth, mop, mechanical spray, or sponge for a period of 10 minutes. Allow surfaces to air dry. Rinse waterers and feeders with potable water before reuse.

COMPANION ANIMALS

CONTROLS: Viruses of Canine Parvovirus and Feline calicivirus; Bacteria of *Staphylococcus aureus*, *Streptococcus pyogenes*, *Klebsiella pneumoniae*, and *Pseudomonas aeruginosa*. Fungi of *Trichophyton interdigitale* (2%).

Not approved in California for use against the following organisms: Viruses of Distemper, Feline parvovirus, Feline herpes; Bacteria of *Leptospira canicola*; Fungi of *Microsporum canis*.

APPLICATION: Use a 1% solution of Virkon™ S as a “one step” cleaning and disinfecting procedure (Remove visible filth and soil deposits before application of the disinfecting/cleaning solution) for all surfaces, equipment, instruments, utensils and cages, caging systems, within or associated with Veterinary Medical Hospitals, animal infectious disease wards, quarantine areas, Humane Society facilities, laboratory animal quarters, grooming and boarding facilities, kennels, catteries and animal transportation vehicles. Saturate surfaces with a 1% solution of Virkon™ S with a cloth, mop, mechanical spray, or sponge for a period of 10 minutes. Allow surfaces to air dry. Rinse waterers and feeders with potable water before reuse. Do not immerse metal objects in Virkon™ S for long periods. Refer to Pathogen list for specific contact times.

GREENHOUSES AND HORTICULTURE

Virkon™ S is intended to disinfect hard, non-porous 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 remove organic deposits.
3. Apply solution with mop, sponge, power sprayer, or fogger to thoroughly wet all surfaces. Refer to pathogen list for specified contact times.
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 HARD 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 for 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 an 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.

AQUACULTURE

(Not approved for this use in California): Virkon™ S intended to disinfect hard, non-porous 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.

EMERGENCY DISEASE CONTROL ANIMAL HEALTH

Disinfection helps to reduce cross-contamination of OIE List A organisms including Newcastle Disease Virus, Foot and Mouth Disease Virus, African Horse Sickness Virus†, Vesicular Stomatitis Virus†, Classical Swine Fever Virus†, (Hog Cholera Virus†), African Swine Fever Virus†, Highly Pathogenic Avian Influenza Virus, Swine Vesicular Disease Virus†, and Mycoplasma mycoides† (Contagious Bovine Pleuropneumonia†).

†Not approved for this use in California.

Use a 1% solution of Virkon™ S to clean and disinfect hard non-porous surfaces associated with 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 harbouring 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).

On surfaces that have been pre-cleaned with water and soap or detergent to remove organic deposits, spray Virkon™ S at 1% solution to disinfect and clean walls, ceilings, floors, decks, container surfaces, vehicles, wheels, waterproof footwear (such as rubber boots), livestock equipment, utensils and instruments. Saturate surfaces for a period of 10 minutes. Treated surfaces should remain visibly wet for duration of contact time. Allow surfaces to air dry. Rinse waterers and feeders with potable water before reuse.

Do not immerse metal objects in Virkon™ S for long periods. Refer to Pathogen List for specific contact times.

USES IN FACILITIES USED FOR TEMPORARY CONFINEMENT OF ANIMALS

Use a 1% solution of Virkon™ S to clean and disinfect hard, non-porous 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 hard, non-porous 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.

DISINFECTION LIMITED TO SPECIFIC AND KNOWN DISEASE ORGANISM PCV2 VIRUS*

(Not approved for this use in California):

The instructions above call for use of a 1% solution for general disinfection. However, Virkon™ S is an effective disinfectant for hard, non-porous surfaces against the following organism at the dilution rate specified below. If the pathogen is limited to the organism below, Virkon™ S may be used at the following dilution rate:

Organism	Dilution	Oz./Gallon
PCV2 virus* (PMWS)	1:200	0.7

REDUCED CONTACT TIME† (3 MINUTES) DISINFECTION LIMITED TO SPECIFIC AND KNOWN DISEASE CANINE PARVOVIRUS:

† - Not approved for this use in California

The instructions above call for use of a 1% solution for general disinfection at a contact time of 10 minutes. However, Virkon™ S is an effective disinfectant for hard, non-porous surfaces against the following organisms with a 3 minute contact time when used at a dilution of 1:75. If the pathogen is limited to the organism below, Virkon™ S may be used at the following dilution rate:

Organism	Dilution	Oz./Gallon
CANINE PARVOVIRUS	1:75	1.7

DISINFECTION LIMITED TO SPECIFIC AND KNOWN DISEASE PORCINE EPIDEMIC DIARRHEA VIRUS, PORCINE ROTAVIRUS, AND PORCINE REPRODUCTIVE & RESPIRATORY SYNDROME†

Virkon™ S is effective against PEDv, PRRS, AND PORCINE ROTAVIRUS at a 1:600 dilution rate†

† - Not approved for this use in California

The instructions above call for use of a 1% solution for general disinfection. However, Virkon™ S is an effective disinfectant for hard, non-porous surfaces against the following organisms at the dilution rates specified below.

If the pathogen is limited to one of the organisms below, Virkon™ S may be used at the following dilution rates:

Organism	Dilution	Oz./Gallon
PEDv virus	1:600	0.215

PRRS	1:600	0.215
PORCINE ROTAVIRUS	1:600	0.215

DISINFECTION LIMITED TO SPECIFIC AND KNOWN DISEASE AVIAN INFLUENZA†

Virkon™ S is effective against AVIAN INFLUENZA at a 1:600 dilution rate†

† - Not approved for this use in California

The instructions above call for use of a 1% solution for general disinfection. However, Virkon™ S is an effective disinfectant for hard, non-porous surfaces against the following organism at the dilution rate specified below. If the pathogen is limited to one of the organism below, Virkon™ S may be used at the following dilution rate:

Organism	Dilution	Oz./Gallon
AVIAN INFLUENZA	1:600	0.215

COLD TEMPERATURE DISINFECTION LIMITED TO SPECIFIC AND KNOWN DISEASES:**VIRKON™ S HAS BEEN PROVEN EFFECTIVE WHEN USED AT TEMPERATURES OF 5°C† FOR THE SPECIFIED PATHOGENS AT THE LISTED DILUTION RATES:**

† - Not approved for this use in California

The instructions above call for use of a 1% solution for general disinfection at room temperature. However, Virkon™ S is an effective disinfectant for hard, non-porous surfaces against the following organisms at a temperature of 5°C at the dilution rates specified below. If the pathogen is limited to one of the organisms below, Virkon™ S may be used at the following dilution rates:

Organism	Dilution	Oz./Gallon
AVIAN INFLUENZA virus	1:200	0.7
AVIAN INFECTIOUS BRONCHITIS	1:200	0.7
AVIAN ADENOVIRUS Type 2	1:200	0.7
PEDv	1:200	0.7
PRRS	1:600	0.215
PORCINE ROTAVIRUS	1:600	0.215

REDUCED CONTACT TIME† DISINFECTION LIMITED TO SPECIFIC AND KNOWN DISEASES:

† - Not approved for this use in California

The instructions above call for use of a 1% solution for general disinfection at a contact time of 10 minutes. However, Virkon™ S is an effective disinfectant for hard, non-porous surfaces against the following organisms with a 1 minute contact time at the dilution rates specified below. If the pathogen is limited to one of the organisms below, Virkon™ S may be used at the following dilution rates:

Organism	Dilution	Oz./Gallon
AVIAN INFLUENZA virus	1:200	0.7
AVIAN INFECTIOUS BRONCHITIS	1:200	0.7
PEDv	1:200	0.7

REDUCED CONTACT TIME, COLD TEMPERATURE (5°C), AND/OR INCREASED DILUTION† FOR DISINFECTION LIMITED TO SPECIFIC AND KNOWN DISEASES:

† - Not approved for this use in California

The instructions above call for use of a 1% solution for general disinfection at a contact time of 10 minutes at room temperature. However, Virkon™ S is an effective disinfectant for hard, non-porous surfaces under specific listed conditions against the following organisms below. If the pathogen is limited to one of the organisms below, Virkon™ S may be used when the corresponding conditions also are applied:

Organism	Dilution	Oz./Gallon	Contact Time (min)	Temperature (°C)
AVIAN ADENOVIRUS Type 2	1:200	0.7	10	5
AVIAN INFECTIOUS BRONCHITIS	1:200	0.7	1	5
AVIAN INFLUENZA virus	1:200	0.7	1	5
AVIAN INFLUENZA virus	1:600	0.215	10	RT
INFECTIOUS LARYNGOTRACHETIS VIRUS	1:200	0.7	10	RT
PEDv	1:200	0.7	1	5
PEDv	1:600	0.215	10	RT
PRRS	1:600	0.215	10	5

PORCINE ROTAVIRUS	1:600	0.215	10	5
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(RT= Room temperature= 20-22°C)

PATHOGEN LIST

PATHOGEN	Dilution Rate	Oz./Gallon	Contact Time	Temp.
VIRUSES*				
Adenovirus Pneumonia†	1:100	1.3 oz	10 mins	RT
African Horse Sickness Virus†	1:100	1.3 oz	10 mins	RT
African Swine Fever Virus† ²	1:100	1.3 oz	10 mins	RT
Avian Adenovirus Type 2†	1:200	0.7 oz	10 mins	5°C
Avian Infectious Bronchitis†	1:200	0.7 oz	10 mins	5°C
Avian Infectious Bronchitis†	1:200	0.7 oz	1 min	RT
Avian Infectious Bronchitis†	1:200	0.7 oz	1 min	5°C
Avian Influenza Virus	1:100	1.3 oz	10 mins	RT
Avian Influenza Virus	1:200†	0.7 oz	10 mins	5°C
Avian Influenza Virus	1:200†	0.7 oz	1 min	RT
Avian Influenza Virus	1:200†	0.7 oz	1 min	5°C
Avian Influenza Virus	1:600†	0.215 oz	10 mins	RT
Avian Influenza Virus	1:600†	0.215 oz	10 mins	RT
Avian Influenza Virus	1:100	1.3 oz	10 mins	RT
Avian [Infectious] Laryngotracheitis Virus	1:100	1.3 oz	10 mins	RT
Avian [Infectious] Laryngotracheitis virus	1:200†	0.7 oz	10 mins	5°C
Avian Reovirus†	1:100	1.3 oz	10 mins	RT
Bovine Adenovirus Type 4	1:100	1.3 oz	10 mins	RT
Bovine Polyoma Virus†	1:100	1.3 oz	10 mins	RT
Bovine Pseudocowpox Virus†	1:100	1.3 oz	10 mins	RT
Bovine Viral Diarrhea Virus† ¹	1:100	1.3 oz	10 mins	RT
Calf Rotavirus† ¹	1:100	1.3 oz	10 mins	RT
Canine Adenovirus (Canine Hepatitis)	1:100	1.3 oz	10 mins	RT
Canine Coronavirus†	1:100	1.3 oz	10 mins	RT
Canine Parainfluenza Virus†	1:100	1.3 oz	10 mins	RT
Canine Parvovirus	1:75†	1.9 oz	3 mins	RT
Canine Parvovirus	1:100	1.3 oz	10 mins	RT
Chicken Anemia Virus†	1:100	1.3 oz	10 mins	RT
Coital Exanthema Virus†	1:100	1.3 oz	10 mins	RT
Distemper Virus†	1:100	1.3 oz	10 mins	RT
Duck Adenovirus† ¹	1:100	1.3 oz	10 mins	RT
Duck Enteritis Virus†	1:100	1.3 oz	10 mins	RT
Egg Drop Syndrome Adenovirus†	1:100	1.3 oz	10 mins	RT
Equine Arteritis Virus† ¹	1:100	1.3 oz	10 mins	RT
Equine Contagious Abortion Virus†	1:100	1.3 oz	10 mins	RT
Equine Herpes Virus (Type 1)	1:100	1.3 oz	10 mins	RT
Equine Herpes Virus (Type 3)	1:100	1.3 oz	10 mins	RT

Equine Infectious Anemia Virus (Swamp Fever)†	1:100	1.3 oz	10 mins	RT
Equine Influenza Virus (The Cough)†	1:100	1.3 oz	10 mins	RT
Equine Influenza Virus (Type A)	1:100	1.3 oz	10 mins	RT
Equine Papillomatosis Virus†	1:100	1.3 oz	10 mins	RT
Feline Calicivirus	1:100	1.3 oz	10 mins	RT
Feline Herpes Virus†	1:100	1.3 oz	10 mins	RT
Feline Infectious Peritonitis Virus†	1:100	1.3 oz	10 mins	RT
Feline Panleukopenia Virus	1:100	1.3 oz	10 mins	RT
Feline Parvovirus†	1:100	1.3 oz	10 mins	RT
Feline Rhinotracheitis Virus	1:100	1.3 oz	10 mins	RT
Foot and Mouth Disease Virus	1:100	1.3 oz	10 mins	RT
Hog Cholera Virus†	1:100	1.3 oz	10 mins	RT
Infectious Bronchitis Virus†	1:100	1.3 oz	10 mins	RT
Infectious Bursal Disease Virus†	1:100	1.3 oz	10 mins	RT
Infectious Canine Hepatitis Virus†	1:100	1.3 oz	10 mins	RT
Infectious Pancreatic Necrosis Virus†	1:100	1.3 oz	10 mins	RT
Infectious Salmon Anaemia Virus†	1:100	1.3 oz	10 mins	RT
Infective Bovine Rhinotracheitis Virus† ¹	1:100	1.3 oz	10 mins	RT
Maedi-Visna Virus†	1:100	1.3 oz	10 mins	RT
Marek's Disease Virus†	1:100	1.3 oz	10 mins	RT
Mouse Parvovirus†	1:100	1.3 oz	10 mins	RT
Newcastle Disease Virus	1:100	1.3 oz	10 mins	RT
PCV2 Virus (PMWS)†	1:100	1.3 oz	10 mins	RT
PCV2 Virus (PMWS)†	1:200	0.7 oz	10 mins	RT
PEDv Virus†	1:100	1.3 oz	10 mins	RT
PEDv Virus†	1:200	0.7 oz	10 mins	5°C
PEDv Virus†	1:200	0.7 oz	1 min	RT
PEDv Virus†	1:200	0.7 oz	1 min	5°C
PEDv Virus†	1:600	0.215 oz	10 mins	RT
Porcine Parvovirus†	1:100	1.3 oz	10 mins	RT
Porcine Reproductive and Respiratory Syndrome virus (PRRS)†	1:100	1.3 oz	10 mins	RT
Porcine Reproductive and Respiratory Syndrome virus (PRRS)†	1:600	0.215 oz	10 mins	RT
Porcine Reproductive and Respiratory Syndrome virus (PRRS)†	1:600	0.215 oz	10 mins	5°C
Porcine Rotavirus†	1:100	1.3 oz	10 mins	RT
Porcine Rotavirus†	1:600	0.215 oz	10 mins	RT
Porcine Rotavirus†	1:600	0.215 oz	10 mins	5°C
Pseudorabies Virus (Aujeszky's Disease)† ¹	1:100	1.3 oz	10 mins	RT
Rotaviral Diarrhea Virus†	1:100	1.3 oz	10 mins	RT
Simian Virus (SV40 Virus)	1:100	1.3 oz	10 mins	RT
Snakehead Rhabdovirus†	1:100	1.3 oz	10 mins	RT
Swine Influenza Virus†	1:100	1.3 oz	10 mins	RT

Swine Vesicular Disease Virus†	1:100	1.3 oz	10 mins	RT
Transmissible Gastroenteritis Virus (TGE)† ¹	1:100	1.3 oz	10 mins	RT
Turkey Herpes Virus† ¹	1:100	1.3 oz	10 mins	RT
Turkey Rhinotracheitis Virus†	1:100	1.3 oz	10 mins	RT
Vesicular Stomatitis Virus†	1:100	1.3 oz	10 mins	RT
BACTERIA				
Actinobacillus pleuropneumoniae	1:100	1.3 oz	10 mins	RT
Bacillus cereus	1:100	1.3 oz	10 mins	RT
Bordetella avium†	1:100	1.3 oz	10 mins	RT
Bordetella bronchiseptica†	1:100	1.3 oz	10 mins	RT
Brucella abortus	1:100	1.3 oz	10 mins	RT
Campylobacter jejuni	1:100	1.3 oz	10 mins	RT
Clostridium perfringens	1:100	1.3 oz	10 mins	RT
Dermatophilus congolensis (2%)	1:50	2.7 oz	10 mins	RT
Escherichia coli	1:100	1.3 oz	10 mins	RT
Fistulous withers (Poll Evil)†	1:100	1.3 oz	10 mins	RT
Haemophilus somnus†	1:100	1.3 oz	10 mins	RT
Helicobacter pylori†	1:100	1.3 oz	10 mins	RT
Klebsiella pneumoniae	1:100	1.3 oz	10 mins	RT
Leptospira canicola†	1:100	1.3 oz	10 mins	RT
Listeria monocytogenes†	1:100	1.3 oz	10 mins	RT
Moraxella bovis (Pink Eye)†	1:100	1.3 oz	10 mins	RT
Mycoplasma gallisepticum	1:100	1.3 oz	10 mins	RT
Mycoplasma hyopneumonia	1:100	1.3 oz	10 mins	RT
Mycoplasma mycoides†	1:100	1.3 oz	10 mins	RT
Pasteurella multocida	1:100	1.3 oz	10 mins	RT
Pseudomonas aeruginosa	1:100	1.3 oz	10 mins	RT
Pseudomonas mallei (Glanders)†	1:100	1.3 oz	10 mins	RT
Proteus vulgaris†	1:100	1.3 oz	10 mins	RT
Salmonella enterica	1:100	1.3 oz	10 mins	RT
Salmonella typhimurium	1:100	1.3 oz	10 mins	RT
Shigella sonnei	1:100	1.3 oz	10 mins	RT
Staphylococcus aureus	1:100	1.3 oz	10 mins	RT
Staphylococcus epidermidis	1:100	1.3 oz	10 mins	RT
Streptococcus equi (Strangles)†	1:100	1.3 oz	10 mins	RT
Streptococcus pyogenes	1:100	1.3 oz	10 mins	RT
Streptococcus suis	1:100	1.3 oz	10 mins	RT
Taylorella equigenitalis†	1:100	1.3 oz	10 mins	RT
Treponema hyodysenteriae†	1:100	1.3 oz	10 mins	RT
FUNGI				
Aspergillus flavus†	1:100	1.3 oz	10 mins	RT

Aspergillus fumigatus†	1:100	1.3 oz	10 mins	RT
Fusarium moniliforme†	1:100	1.3 oz	10 mins	RT
Microsporum canis†	1:100	1.3 oz	10 mins	RT
Trichophyton interdigitale (2%)	1:50	2.7 oz	10 mins	RT
PLANT PATHOGENS				
Alternaria solani†	1:100	1.3 oz	10 mins	RT
Botrytis cinera†	1:100	1.3 oz	10 mins	RT
Colletotrichum coccodes†	1:100	1.3 oz	10 mins	RT
Didymella bryoniae†	1:100	1.3 oz	10 mins	RT
Fusarium oxysporum†	1:100	1.3 oz	10 mins	RT
Fusarium solani†	1:100	1.3 oz	10 mins	RT
Penicillium oxalicum†	1:100	1.3 oz	10 mins	RT
Phomopsis sclerotoides†	1:100	1.3 oz	10 mins	RT
Pyrenochaeta lycoopersici†	1:100	1.3 oz	10 mins	RT
Pythium aphanidermatum†	1:100	1.3 oz	10 mins	RT
Rhizoctonia solani†	1:100	1.3 oz	10 mins	RT
Sclerotinia sclerotiorum†	1:100	1.3 oz	10 mins	RT
Thielaviopsis basicola†	1:100	1.3 oz	10 mins	RT
Verticillium dahliae†	1:100	1.3 oz	10 mins	RT
Xanthomonas axonopodis†	1:100	1.3 oz	10 mins	RT

(RT= Room temperature= 20-22°C)

† Not approved for this use in California.

¹ No hard water.

² Tested with 1% Soil load, and 342 ppm hard water.

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