





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 Jakes, 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.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or 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 jid after use. Retain desiccant canister with product during storage. 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 quidance.

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.

BROAD SPECTRUM DISINFECTANT:

VirkonTM 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 mysoplasma. 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."





Disinfectant and Virucide

FFFFCTIVE AGAINST THE FOLLOWING PATHOGENS: ANIMAL AND ZOONOTIC PATHOGENS

BACTERIA

Actinobacillus pleuropneumoniae **Bacillus** cereus Rrucella abortus Campylobacter ieiuni 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 Leptospira canicola Moraxella bovis (Pink Eve) 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 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) **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 Evantherma Virus Distemper Virus Duck Adenovirus (no hard water)

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 Infectious Bronchitis Virus Infectious Bursal Disease Virus Infectious Canine Hepatitis Virus Infective Bovine Rhinotracheitis Virus (no hard water) Maedi-Visna Virus

Duck Enteritis Virus

Eaa Drop Syndrome

Adenovirus

Hog Cholera Virus Marek's Disease Virus Mouse Parvovirus PCV2 Virus (PMWS)

Porcine Epidemic Diarrhea Virus Porcine Parvovirus Porcine Reproductive and Respiratory Syndrome Virus (PRRS) Pseudorabies Virus (Aujesky'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

mentagrophytes (2%) Not approved in California for use

FUNGI

Trichophyton

against the following fungi: Aspergillus fumigatus Fusarium moniliforme Microsporum canis Mycoplasma hyopneumonia Trichophyton spp. (Ringworm) Trichophyton spp. (Mud Fever)





VIRKON™ S DISINFECTANT AND VIRUCIDE DILUTION CHART

To achieve the appropriate use-diluted Virkon $^{\text{TM}}$ S concentration, fill container with the volume of water and quantity of powder found in the following table.

Solutions are stable for 7 days. Do not soak metal objects in Virkon^M S for long periods - 10 minutes is maximum necessary contact time. One gallon of solution is sufficient to treat 135 sq. ft. Measuring cup provided.

Quantity of Wate	er 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
4			

† 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

- Remove all poultry or other animals and feeds from premises, trucks or other vehicles, coops, crates or other enclosures.
- 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 disinfecting solution for a period of 10 minutes.

- 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 making.
- 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.
- Thoroughly scrub treated feed racks, mangers, troughs, automatic feeders, fountains, and waterers with soap or detergent, and rinse with potable water before reuse.
 This powder formulation is easily diluted for use in manual or machine operations.

POULTRY AND RATITE PRODUCTION CONTROLS:

Viruses of Newcastle Disease, Avian Laryngotracheitis and Avian Influenza; Bacteria of Streptococcus pyogenes, Rlebsiella 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 polori.

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 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.





FOGGING (WET MISTING) INSTRUCTIONS - POULTRY AND RATITE PRODUCTION

Follow General Instructions to remove poultry and/or animals from room to be treated.

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

Close room off, so fog is confined to room to be treated. Prepare a Virkon TM S at dilution of 1.0% to 2.0% in water (1:100 to 1:50).

Apply at an application rate of 1 gallon per 430 ft² of floor space. Use a mechanical or plumbed in misting system designed for water-based applications with a droplet size of greater than 50 microns, or a pressure washer/ knapsack or tank sprayer to deliver fine mist. Insert the nozzle of the fogging device through a suitable opening in the room. Do not allow people to breathe or contact the fog or to enter the room until the fog has completely settled or exhausted. Do not house animals or use equipment until treatment has dried. Rinse waterers and feeders with potable water before reuse. Rinse foggers and sprayers with potable water following use.

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

BROILER/BREEDER HOUSES: Follow General Instructions to remove poultry and preclean area to be reated. 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 potable water. Do not house poultay or use equipment until treatment has dried.

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

SWINE PRODUCTION

CONTROLS: Bacteria of Actinobacillus Pleuropneumoniae and Clostribium perfringens; Foot and Mouth Disease virus, Fungi of Trichophyton mentragrophytes (2%). Not approved in California for use against the following organisms: Viruses of Hog Cholera, Swine influenza, Porcine Parvoirus, Porcine Reproductive and Respiratory Syndrome Virus (PRRS); Pseudorabies, Rotoviral Diarrhea, Ahicah Swine Fever, Fungi of Fusarium moniliforme and Bacteria of Treponema hyodysenteriae.

Follow General Instructions to remove swine and pre-clean area to be treated. Use a 1% solution of VirkonTM 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 an dry. Rinse waterers and feeders with potable watet before reuse.

FOGGING (WET MISTING) - SWINE

Follow General Instructions to remove poultry and/or animals from room to be treated.

Use a 0.3%-1.0% solution of Virkon^M S for fogging wet misting) operations as a supplemental measure 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 potable water following use. Refer to Fooging (Wet Misting instructions).

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 congolenisis (at 2%), Pseudomonas aeruginosa, Salmonella typhimurium and Staphylococcus aureus. Fungi of Trichophyton mentaorophytes (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 Exantherma, Myeloencephalopathy, Rhinopneumonitis, Equine Contagious Abortion, Equine Papillomatosis, Equine Infectious anemia (Swamp Fever), Adenovirus Pneumonia, Equine Influenza (The Couch) and

Rhinitis; Bacteria of Clostridial Diarrhea, Fistulous Withers (Poll Evil), Taylorella equigentialis, Bordetella bronchiseptica, Streptococcus equi (Strangles) and Pseudomonas mallei (Glanders), Fungi of Dermatophytosis (Ringworm) and Dermatophylosis (Mud Fever).

APPLICATIONS: For cleaning and disinfecting all nonporous 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% VirkonTM 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 1th solution of Virkon™ S, shampoo by frand 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, and Fungi of Tirchophyton mentragrophytes (2%). Not approved in California for use against the following organisms: Bacteria of Moravella bow's and Fung of Fusarium moniliforme. Viruses of Calif rota/hus, Infectious Bovine Rhinotracheitis, Pseudorabies and Bacteria of Haemophilus somnus.

Follow General Instructions to remove Injectock and preclean area to be treated, Use a 1% solution of Virkon¹⁴ S to clean and disnifect areas associated with bowine housing stabiling, hospilet 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 Virkon¹⁴ S with a cloth, mop, mechagical spray, or sponge for a period of 10 minutes. Allow surfaces to air dry. Rinse waterers and feeders with probable vater before reuse.

FOGGING (WET MISTING) - BOVINE

Follow General Instructions to remove poultry and/or animals from room to be treated.

Use a 0.5% -1.0% solution of Virkon™ S for fogging (wet misting) operations as a supplemental measure 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 poliphe water following use. Refer to Fogging (Wet Misting instructions). COMPANION ANIMALS

CONTROLS: Viruses of Canine Parvovirus and Feline calicitrus: Bacteria of Staphylococcus aureus, Steptococcus pogenes, Klebsiella pneumoniae, and Pseudomonas aeruginosa. Fungi of Trichophyton quentragrophytes (2%). Not approved in California for use against the following organisms: Viruses of Distemper, Leptospira canicola, Feline parvovirus, Feline herpes; Fungi of Microsporum canis.

APPLICATION: Use a 1% solution of Virkon™ S as a "one step" cleaning and disinflecting procedure (Remove Gross filth and heavy soil deposits before application of the disinflecting/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 - 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

- 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 precleaned 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.
- 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 debts. Use power sprayer to wash all surfaces to remove loose dirt. Use a dilution of 1:100 or 1.3 oz. of Virkon ^{N. S} per gallon of cleanwater

Use a dilution of 1,60 or 2.6 oz of Virkon™ S per gallon o clean water if surfaces that are to be treater have not been pre-cleaned with water to remove organic deposits. For evaporative coolers: Not approved use in Qalifornia: Treat existing algae and slime-contaminated surfaces with ail-100 dilution of "irkon" 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.

VirkonTh 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.

FOGGING (WET MISTING) INSTRUCTIONS - GREENHOUSE/HORTICULTURE

Use a 0.5%-1.0% solution of Virkon™ S for fogging (wet misting) operations as a supplemental measure after regular cleaning and disinfecting procedures.

Not approved in California for fogging at dilutions less than 1%. Fog (wet mist) until the area is most using automatic foggers according to manufacturer's use directions. Rinse foggers and sprayers with potable water following use, Refer to Fogging (Wet Misting instructions).

EMERGENCY DISEASE CONTROL (ANIMAL HEALTH)

Distrigation helps to control and prevent the cross-contamination of OIE List A organisms including; Newcastle Disease Virus, Foot and Mouth Disease Virus, African Horse Sickness Virust, Vesicular Stomatitis Virust, Classical Swine Fever Virust, (Hog Cholera Virust), African Swine Fever Virust, Highly Pathogenic Avian Influenza Virus, Swine Vesicular Disease Virust, and Mycoplasma mycoidest (Contagious Bovine Pleuropneumoniat).

Use a 1% solution of Virkon™ S to clean and disinfect agricultural facilities and equipment, military facilities and equipment, airport facilities and equipment, proft facilities and equipment, airl 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, waterproof footwear (such as rubber boots), livestock equipment, utensils and instruments. Saturate surfaces 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 - 10 minutes is maximum contact time.

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 TM S is an effective disinfectant for all hard,

Manufactured for:

Lanxess Corporation 111 RIDC Park West Drive Pittsburgh, PA 15275 non-porous surfaces against the following organism 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:

Organism	Dilution Rate	Oz./Gal
PCV2 Virus* (PMWS)	1:200	0.7

USES IN FACILITIES USED FOR TEMPORARY CONFINEMENT OF ANIMALS

Use a 1% solution of Virkon^M S 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 an over feed and water apparatus. To ensure predise application on inanimate surfaces, Virkon™ S may only be applied using hand-held sprayers, sponges or other absorbent materials. Bo not allow Virkon™ S to pool on surfaces that may be writtin reach of animals. Do not allow Virkon™ S to come into direct contact with people. 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. This product has demonstrated effectiveness against influenza A viruse and is expected to inactivate all influenza A viruses including Pandemic 2009 H1M1 influenza A viruses

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