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## **VIRKON<sup>®</sup> DISINFECTANT/CLEANER P.W.S.**

### ***Vétoquinol***

DISINFECTANT VIRUCIDE FUNGICIDE CLEANER

DIN 02125021

**IN INDEPENDENT TESTS PROVEN EFFECTIVE AGAINST 18 VIRUS FAMILIES AFFECTING MAN AND ANIMALS.**

#### **INDUSTRIAL**

Non corrosive germicide for cleaning and disinfection of agricultural buildings such as dairy barns, horse barns, piggeries, poultry houses, shelter sheds and other types of livestock buildings. Also for use in veterinary hospitals and food processing plants.

#### **GUARANTEE / ACTIVE INGREDIENT**

Potassium monopersulfate	21.4% W/W
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**KEEP OUT OF REACH OF CHILDREN**

**READ THE LABEL AND LEAFLET BEFORE USING**

#### **VIRUCIDE**

**BACTERICIDE:** Staphylocide, pseudomacide, salmonellacide

**FUNGICIDE:** Aspergillocide, Trichophytonicide

#### **DEODORANT**

**DANGER:** Eye and skin irritant.

CAUTION - POISON

#### **DESCRIPTION**

**VIRKON<sup>®</sup>** is a disinfectant, possessing wide spectrum virucidal (Table 2), bactericidal (Table 3) and fungicidal (Table 4) activity. The effectiveness of **VIRKON<sup>®</sup>** is further enhanced by its excellent detergent properties, so that clean disease-free surfaces can be achieved. **VIRKON<sup>®</sup>** is unique in its composition. Its activity is based on a buffered synergized acid peroxygen system containing a high percentage of surfactant. **VIRKON<sup>®</sup>** can be used on all surfaces and in all situations. Once diluted in a 1% solution, **VIRKON<sup>®</sup>** is of low toxicity, non-tainting, and non-irritant. Because of its high detergency and mode of action, **VIRKON<sup>®</sup>** can be used in an exceptional variety of situations for effective cleaning and virucidal disinfection in a single operation. **VIRKON<sup>®</sup>** can be applied manually or through all types of cleaning and spraying equipment. Readily soluble in lukewarm water giving a clear pink solution. **VIRKON<sup>®</sup>** consists mainly of inorganic salts.

#### **DETERGENT SANITIZER**

**VIRKON<sup>®</sup>** passes the AOAC germicidal and detergent sanitizer test at a concentration of 0.5% (1:200).

#### **DIRECTIONS FOR USE**

**CAUTION: In agricultural buildings: animals must be removed from the premise during disinfection. In food processing plants: for food contact surfaces, rinse thoroughly with potable water after disinfection.**

##### **1- For cleaning and disinfection of surfaces and equipment:**

*In agricultural buildings* - Remove all animals from premises. Remove all litter and manure from floors, walls, and other surfaces of barns and equipment. Brush and blow dust from fans, motors, louvers and electrical equipment. For terminal cleaning and disinfection, saturate all surfaces with a 1% w/v solution of **VIRKON<sup>®</sup>**, using a pressure washer or a fogger. **VIRKON<sup>®</sup>** should remain in contact with the surface to be disinfected for at least 10 minutes. Scrub heavily soiled utensils and soak in a 1% w/v solution of **VIRKON<sup>®</sup>** for 10 minutes (do not exceed 30 minutes for metal objects).

*In veterinary hospitals* - Remove heavy soil deposits then thoroughly wet surfaces to be disinfected with a 1% w/v solution of **VIRKON<sup>®</sup>**, using a mop, sponge or cloth, as well as by spraying. A minimum contact

time of 10 minutes is required. For laboratory equipment and bowls, scrub heavily soiled utensils and soak in a 1% w/v solution of **VIRKON®** for a minimum of 10 minutes (do not exceed 30 minutes for metal objects).

**IMPORTANT NOTE: In animal premises where there has been a disease outbreak and/or the mortality/morbidity rates are higher than normal and the causative agent has been determined by a pathology laboratory to be one of those listed in Table 1, the contact time/dilution rate indicated should be used.**

*In food processing plants* - Remove all debris and other deposits from surfaces. Then, thoroughly wet surfaces to be disinfected with a 1% w/v solution of **VIRKON®**, using a mop, sponge or cloth, as well as by spraying. A minimum contact time of 10 minutes is required. For food contact surfaces, rinse thoroughly with potable water after treatment with **VIRKON®**.

For a complete listing of microorganisms against which **VIRKON®** is effective, refer to the Efficacy charts 2, 3 and 4.

**2- For aerial disinfection:**

To replace dangerous and ineffective formalin fumigation in empty farm buildings and veterinary hospitals. Shutdown the ventilation system during the disinfection. Use a mechanical fogging machine as part of terminal disinfection routine with a 1% w/v solution of **VIRKON®**. Apply at a rate of one litre of solution per 100 m<sup>3</sup> with particle size not exceeding 70 microns in order to get a minimal contact time of 10 minutes with microorganisms in the air. Leave the room during the fogging. Users and animals may re-enter the treated area once the fog has dispersed. No rinsing is required after fogging.

**3- Sanitizing drinking water system:**

For sanitizing drinking water system at terminal clean out, use a 1.0% w/v solution of **VIRKON®**. Dose header tank and drain system. Wait at least 10 minutes before draining again.

**DILUTION INSTRUCTIONS:**

DILUTION RATE REQUIRED (w/v)					
3.0%	2.0%	1.0%	0.5%	0.2%	
QUANTITY OF <b>VIRKON®</b> REQUIRED					QUANTITY OF DISINFECTANT SOLUTION REQUIRED
30 g	20 g	10 g	5 g	2 g	1 LITRE
150 g	100 g	50 g	25 g	10 g	5 LITRES
300 g	200 g	100 g	50 g	20 g	10 LITRES
750 g	500 g	250 g	125 g	50 g	25 LITRES

- 1) Select the quantity of disinfectant solution required.
- 2) Choose appropriate dilution rate.
- 3) Measure out the amount of **VIRKON®** indicated using the graduated measuring scoop provided.
- 4) Add **VIRKON®** to warm water and stir.

There is a 20% loss of activity of 1% solutions of **VIRKON®** after 14 days in 350 ppm hard water. There is a 2.1% loss of activity of the powder after 26 weeks at 20°C.

**HEALTH AND SAFETY: FIRE HAZARD: Non-flammable**

**PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN. POWDER IRRITATING TO EYES, SKIN AND MUCOUS MEMBRANES. MAY BE HARMFUL IF SWALLOWED OR INHALED.** Do not get powder in eyes. Avoid contact of powder with skin. Handle in such a way as to minimize dust release. Do not mix with other chemicals. When mixing the solution, wear goggles, chemical-resistant gloves, and a mask. It is recommended that workers wear overalls, goggles and a mask when applying **VIRKON®** solution with a hand-held fogger or a pressure washer.

**DISPOSAL:** 1) Rinse the emptied container thoroughly and add the rinsings to treatment site. 2) Follow provincial instructions for any required additional cleaning of the container prior to its disposal. 3) Make the empty container unsuitable for further use. 4) Dispose of the container in accordance with provincial requirements. 5) For information on the disposal of unused, unwanted product and the cleanup of spills, contact the Provincial Regulatory Agency or the Manufacturer.

**FIRST AID:** A) **Eyes:** Irrigate with plenty of water. B) **Skin:** When in powder, remove contaminated clothing. Wash with soap and water. Not hazardous when in solution. C) **Ingestion:** When in powder, wash mouth with plenty of water. Drink plenty of water. Do not induce vomiting. Seek medical advice. If in solution, rinse mouth out with water. D) **Inhalation:** When in powder, if symptoms of coughing, choking, wheezing are troublesome, remove to fresh air and seek medical advice.

**STORAGE:**

Store between 15 and 25 °C in a dry place in tightly sealed containers.

**PRESENTATION:**

- Pouch of 50 g
- Bottle of 500 g,
- Pail of 5 kg and 20 kg.

Distributed by: **Vétoquinol N.-A. Inc.**, 2000, ch. Georges, Lavaltrie, QC Canada J5T 3S5

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**TABLE 1: Micoorganisms for which a dilution rate of VIRKON® >1% W/V or a contact time >10 minutes are required.**

Microorganism	Effective dilution of VIRKON®	Contact Time Required (minutes)	Test Method
Aspergillus fumigatus	3%	10	AOAC Fungicidal Test
Bovine Papilloma Virus	1%	30	MAFF, UK Method
<i>Dermatophilus congolensis</i>	2%	10	AOAC Use Dilution Test
Fusarium moniliforme	2%	10	AOAC*
PRRS Virus	0.5%	30	CVL, UK Yeast Method
<i>Salmonella enteritidis</i>	2%	10	AOAC Use Dilution Test
Trichophyton mentagrophytes	2%	10	AOAC*

\* Modification of AOAC Fungicidal Test

**TABLE 2: Viruses for which a 1% W/V dilution rate of VIRKON® and a contact time of 10 minutes are known to be effective.**

Viruses	Effective dilution of VIRKON®	Contact time required (minutes)	Test Method
Avian Infectious Bronchitis Virus	1%	10	AOAC*
Avian Influenza Virus	1%	10	AOAC*
Avian Laryngotracheitis Virus	1%	10	AOAC*
Bovine Adenovirus Type 4	1%	10	EPA Method
Bovine Viral Diarrhea (BVD) Pestivirus	1%	10	EPA Method
Calf Rotavirus	1%	10	EPA Method
Canine Parvovirus	1%	10	EPA Method
Duck Adenovirus	1%	10	EPA Method
Equine Arteritis Virus	1%	10	EPA Method

Equine Herpes Virus Type 1	1%	10	EPA Method
Equine Herpes Virus Type 3	1%	10	EPA Method
Equine Influenza Virus Type A	1%	10	EPA Method
Feline Calicivirus	1%	10	EPA Method
Feline Panleukopenia Virus	1%	10	EPA Method
Feline Rhinotracheitis Virus	1%	10	EPA Method
Infectious Bovine Rhinotracheitis Virus	1%	10	EPA Method
Infectious Bronchitis Virus	1%	10	AOAC*
Infectious Bursal Disease (Gumboro) Virus	1%	10	AOAC*
Infectious Canine Hepatitis Adenovirus	1%	10	EPA Method
Newcastle Disease Virus	1%	10	AOAC*
Parainfluenza Virus	1%	10	EPA Method
Parvovirus	1%	10	EPA Method
Pseudorabies Virus	1%	10	EPA Method
Simian Virus 40 (SV40)	1%	10	EPA Method
TGE-Coronavirus	1%	10	EPA Method
Turkey Herpes Virus	1%	10	EPA Method

\* Modification of the AOAC Germicidal Spray Test

**TABLE 3: Bacteria for which a 1% w/v dilution rate of VIRKON® and a contact time of 10 minutes are known to be effective.**

Bacteria	Effective	Contact time	Test Method
<i>Actinobacillus pleuropneumoniae</i>	1%	10	AOAC*
<i>Bordetella avium (Alcaligenes faecalis)</i>	1%	10	AOAC Use Dilution Test
<i>Bordetella bronchiseptica</i>	1%	10	AOAC Use Dilution Test
<i>Brucella abortus</i>	1%	10	AOAC Use Dilution Test
<i>Helicobacter pylori (Campylobacter pyloridis)</i>	1%	10	AOAC Use Dilution Test
<i>Campylobacter jejuni</i>	1%	10	AOAC*
<i>Chlamydia psittaci</i>	1%	10	EPA Method
<i>Erysipelothrix rhusiopathiae</i>	1%	10	AOAC Use Dilution Test

<i>Escherichia coli</i>	1%	10	AOAC Use Dilution Test
<i>Haemophilus somnus</i>	1%	10	AOAC Use Dilution Test
<i>Klebsiella pneumoniae</i>	1%	10	AOAC Use Dilution Test
<i>Listeria monocytogenes</i>	1%	10	AOAC Use Dilution Test
<i>Moraxella bovis</i>	1%	10	AOAC Use Dilution Test
<i>Mycoplasma gallisepticum</i>	1%	10	AOAC Use Dilution Test
<i>Pasteurella hemolytica</i>	1%	10	AOAC Use Dilution Test
<i>Pasteurella multocida</i>	1%	10	AOAC Use Dilution Test
<i>Pseudomonas aeruginosa</i>	1%	10	AOAC Use Dilution Test
<i>Salmonella choleraesuis</i>	1%	10	AOAC Use Dilution Test
<i>Salmonella typhimurium</i>	1%	10	AOAC Use Dilution Test
<i>Serpulina (Treponema) hyodysenteriae</i>	1%	10	AOAC Use Dilution Test
<i>Shigella sonnei</i>	1%	10	AOAC Use Dilution Test
<i>Staphylococcus aureus</i>	1%	10	AOAC Use Dilution Test
<i>Staphylococcus epidermidis</i>	1%	10	AOAC Use Dilution Test
<i>Streptococcus equi</i>	1%	10	AOAC Use Dilution Test
<i>Streptococcus suis</i>	1%	10	AOAC Use Dilution Test
<i>Haemophilus (Taylorella) equigenitali</i>	1%	10	AOAC Use Dilution Test

\*Modification of the AOAC Use Dilution Test

**TABLE 4: Fungi for which a maximum 1% w/v dilution rate of VIRKON® and a contact time of 10 minutes are known to be effective.**

Fungi	Effective dilution of VIRKON®	Contact Time Required (minutes)	Test Method
<i>Candida albicans</i>	1%	10	AOAC Use Dilution Test
<i>Microsporium canis</i>	0.5%	10	MHW Guideline, Japan
<i>Trichophyton verrucosum</i>	0.5%	10	MHW Guideline, Japan

\* Modification of AOAC Fungicidal Test  
07.06

NET CONTENTS:	Code:	
50 x 50 g	02353001	03.05
500 g	01111	03.05
2 x 5 kg	02353000	03.05
20 kg	02353003	04.05

**NAC No.:** 12341682