

# **Virkon<sup>®</sup>** **LSP**

**Multipurpose Broad Spectrum  
Synthetic Phenolic Farm Disinfectant**



Flexibility and broad spectrum activity.  
Efficacy against viruses, bacteria  
and fungi in a wide range  
of temperatures and in the  
presence of organic challenge.



# Virkon® LSP

## Composition

Virkon® LSP is a synergistic blend of synthetic phenolics specifically designed to provide flexibility of application with broad spectrum activity and efficacy against viruses, bacteria and fungi in a wide range of temperatures and in the presence of organic challenge.



**Virkon® LSP provides a highly convenient multipurpose biosecurity solution for a wide range of disinfectant applications including:**

- Surfaces
- Equipment
- Boot dips
- Wheel dip
- Thermal fogging

## Independently proven broad spectrum killing power

Virkon® LSP has a significant number of efficacy studies supporting approved label claims against OIE listed diseases, including; exotic Highly Pathogenic Avian Influenza (HPAI), Newcastle Disease (ND), African Swine Fever (ASF), Porcine Reproductive and Respiratory Syndrome (PRRS), Foot and Mouth Disease (FMD), and *Salmonella*.

The broad spectrum efficacy of Virkon® LSP has been independently proven effective against an extensive portfolio of viral and bacterial disease-causing organisms using a wide range of contact times, temperatures and organic challenge. Additionally, Virkon® LSP is UK DEFRA Approved for Foot and Mouth Disease (FMD), Swine Vesicular Disease (SVD), Diseases of Poultry (DoP), Tuberculosis Orders (TB) and General Orders (GO).

## Proven to kill on farm as well as in the laboratory

Proven on-farm efficacy offers producers the reassurance and knowledge that the product they are using will be effective in real farm conditions, where varying temperatures and high levels of organic challenge can present serious problems to other disinfectant technologies.

The robust formulation of Virkon® LSP is also independently proven to penetrate biofilms that can help protect disease-causing pathogens such as *Pseudomonas aeruginosa*, on walls, pen railings and



equipment. This additional benefit provides reassurance that Virkon® LSP disinfectant solution will penetrate any organic matter that may be left behind after the cleaning stage, and kill the pathogens concealed inside.

## Superior cold temperature performance

The ability of a disinfectant to work well at low temperatures contributes to the value of its use on a daily basis.

Virkon® LSP remains effective against disease-causing organisms at 4°C.



## Routine disinfection of surfaces & equipment

Prior to any disinfection stage of a biosecurity programme, ensure that all surfaces and equipment have been thoroughly cleaned using a LANXESS Biosolve® heavy-duty detergent, then rinsed with clean water and allowed to dry, prior to applying Virkon® LSP disinfectant solution. Please note, Virkon® LSP can only be used for the terminal disinfection stage on egg layer farms.

Surface disinfection	Dilution rate	Application
Routine general pre-cleaned surface disinfection	1:400 - 1:200  (25-50ml of Virkon® LSP concentrate per 10 litres of water)	In conditions of low soiling and temperatures of 20°C and above, apply at 1:400. For all other conditions, use at 1:200.  Using a pressure washer or other mechanical sprayer, apply Virkon® LSP solution at a rate of 300 ml/m <sup>2</sup> (or to the point of "run-off").  Allow a contact time of 10 to 30 minutes*. Leave to dry.

(\*for UK DEFRA applications, use a minimum contact time of 30 minutes)

Equipment disinfection	Dilution rate	Application
Routine disinfection of moveable equipment	1:200 (50ml of Virkon® LSP concentrate per 10 litres of water)	Using a pressure washer or other mechanical sprayer, apply Virkon® LSP solution to the point of "run-off".
General equipment		Equipment may be dipped in Virkon® LSP solution for a maximum of 60 minutes.  Allow a contact time of 10 to 30 minutes and leave to dry before reuse.

NB. Equipment can be dipped in a 1:200 or 1:400 Virkon® LSP disinfectant solution for a maximum of 60 minutes.

## Disease challenge & emergency disease outbreak situations

For control of specific pathogen challenges, the in-use dilution rate of Virkon® LSP should be amended to that at which it was proven effective; see the efficacy data tables for precise dilution rates. In emergency disease outbreak situations, use Virkon® LSP at a 1:100 dilution for all routine disinfection biosecurity measures.

Disinfection	Dilution rate	Application
Surfaces, equipment, boot dip & vehicle wheel spray disinfection	1:100 (100ml of Virkon® LSP concentrate per 10 litres of water)	Use as instructed as per the routine general farm application guide above.

## Thermal Fogging Disinfection

Use	Dilution rate	Application
Thermal fogging (Terminal disinfection, as part of a biosecurity cleaning and disinfection programme)	2 ml/m <sup>3</sup> of Virkon® LSP  Prepared as a solution to be applied at 15.5 ml/m <sup>3</sup>  e.g. 78% water, 9% monopropylene glycol (MPG) and 13% Virkon® LSP	Fill the thermal fogging machine with the required volume of Virkon® LSP solution*. Direct the nozzle of the fogger into the building, with the air intake situated outside of the building, and activate. Leave the building closed for a minimum of 60 minutes and allow mist to fully disperse before re-entering.

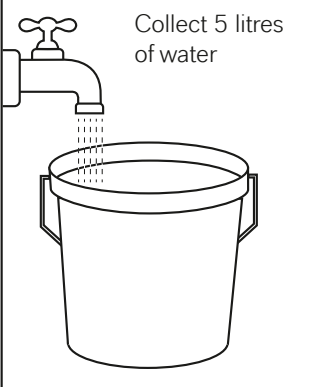
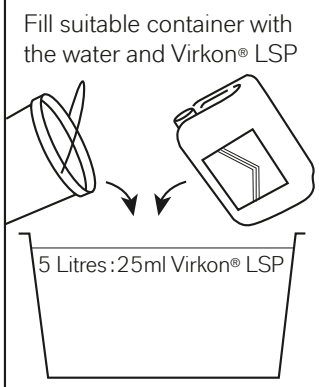
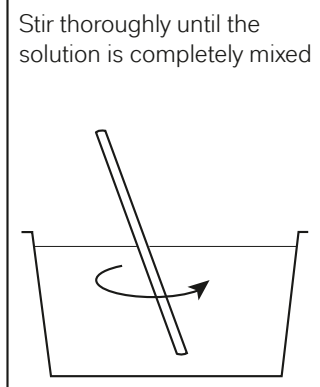
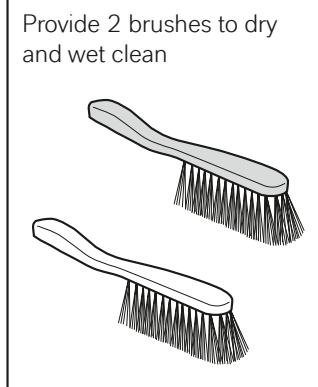
\*To calculate the required volume of solution, multiply 15.5 ml by the volume of the shed in m<sup>3</sup>. Prepare this solution by mixing 13% Virkon® LSP, 9% MPG and 78% water. (Example for a 3000m<sup>3</sup> shed: 15.5 ml x 3000 m<sup>3</sup> = 46500 ml or 46.5 L of solution // 13% Virkon® LSP = 6 L // 9% MPG = 4.2 L // 78% water = 36.3 L).

## Footwear & vehicle wheels

### Disinfectant boot dips

Prepare a fresh solution directly in the boot dip container, at a 1:200 routine dilution rate (1:100 for emergency disease control), ensuring that any old solution is disposed of before commencing.

### How to make a Virkon® LSP disinfectant boot dip - preparing the solution

<b>STEP 1</b>  Collect 5 litres of water	<b>STEP 2</b>  Fill suitable container with the water and Virkon® LSP	<b>STEP 3</b>  Stir thoroughly until the solution is completely mixed	<b>STEP 4</b>  Provide 2 brushes to dry and wet clean
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### How to use a Virkon® LSP disinfectant boot dip

<b>STEP 1</b>  Remove organic matter from boots and soles	<b>STEP 2</b>  Using the other brush, clean boot with water, paying particular attention to the soles	<b>STEP 3</b>  Step into Virkon® LSP disinfectant solution covering the foot of the boot	<b>STEP 4</b>  Refresh boot dip every 7 days, or more frequently when heavily soiled
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## Disinfectant wheel dip baths

Prepare the Virkon® LSP solution, at a 1:200 dilution rate, directly in the vehicle disinfectant wheel dip bath ensuring that any old solution is suitably disposed of before commencing. Replace the disinfectant when soiled, or more frequently if heavy traffic is encountered.



## Summary efficacy data for Virkon® LSP

Viruses	Test method	Dilution rate	Contact time (mins)
African Swine Fever (ASF)	EN 14675 (modified)	1:400	1
Avian Influenza (AI) H3N2	US EPA Guideline	1:400	10
Avian Influenza (AI) H5N1	US EPA Guideline	1:1000	10
Avian Influenza (AI) H3N8	EN 14675 (modified)	1:400	5
Avian Influenza (AI) H5N8	EN 14675 (modified)	1:500	1
Bovine enterovirus (ECBO)	EN 14675	1:100	10
Bovine Viral Diarrhoea (BVD)	US EPA Guideline	1:200	10
Foot and Mouth Disease (FMD)	UK DEFRA Protocol	1:1100	30
Infectious Bronchitis (IB)	US EPA Guideline	1:400	10
Infectious Bursal Disease (IBD or Gumboro)	US EPA Guideline	1:75	60
Infectious Bursal Disease (IBD or Gumboro)	US EPA Guideline	1:50	10
Infectious Laryngotracheitis (ILT)	US EPA Guideline	1:400	10
Newcastle Disease (ND)	UK DEFRA Protocol	1:90	30
Newcastle Disease (ND)	US EPA Guideline	1:600	10
Porcine Epidemic Diarrhoea (PED)	US EPA Guideline	1:600	10
Porcine Reproductive and Respiratory Syndrome (PRRS)	US EPA Guideline	1:600	10
Swine Influenza (SI)	US EPA Guideline	1:400	10
Swine Vesicular Disease (SVD)	UK DEFRA Protocol	1:50	30

Fungi & Yeasts	Test method	Dilution rate	Contact time (mins)
<i>Aspergillus niger</i>	AOAC Method	1:200	10
<i>Candida albicans</i>	AOAC Method	1:400	10
<i>Trichophyton mentagrophytes</i>	AOAC Method	1:200	10

The specified uses and registered claims for Virkon® LSP may vary from country to country. Please contact LANXESS directly to verify country-specific approved usages. See page 6 for contact details.



## Summary efficacy data for Virkon® LSP

Bacteria	Test method	Dilution rate	Contact time (mins)
<i>Campylobacter jejuni</i>	AOAC Method	1:200	10
<i>Campylobacter jejuni</i>	EN 1656 (modified)	1:200	10
<i>Escherichia coli</i> (ESBL)	EN 1656 (modified)	1:400	10
<i>Escherichia coli</i> O157:H7	AOAC Method	1:400	10
<i>Escherichia coli</i>	AOAC Method	1:600	10
<i>Klebsiella pneumoniae</i> (ESBL)	EN 1656 (modified)	1:400	30
<i>Mycoplasma hyopneumoniae</i>	AOAC Method	1:200	10
<i>Mycoplasma bovis</i>	AOAC Method	1:200	10
<i>Pseudomonas aeruginosa</i>	AOAC Method	1:400	10
<i>Pseudomonas aeruginosa</i>	Biofilm method ASTM E2799-12	1:400	60
<i>Salmonella enteritidis</i>	EN 1656 (modified)	1:200	10
<i>Salmonella enterica</i>	AOAC Method	1:400	10
<i>Salmonella enterica</i> serotype Typhimurium	AOAC Method	1:200	10
<i>Salmonella infantis</i>	EN 1656 (modified)	1:200	10
<i>Salmonella</i> Typhimurium (monofasic)	EN 1656 (modified)	1:200	10
<i>Streptococcus suis</i>	AOAC Method	1:200	10
<i>Staphylococcus aureus</i>	AOAC Method	1:400	10

Mycobacteria	Test method	Dilution rate	Contact time (mins)
<i>Mycobacterium terrae</i>	EN 14204	1:100	30
<i>Mycobacterium avium</i>	EN 14204	1:100	30

*Mycobacterium terrae* is a surrogate for *Mycobacterium tuberculosis* and *Mycobacterium avium* for *Mycobacterium* species in the veterinary area.



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**Use biocides safely. Always read the label and product information before use.**

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