



NEOGEN[®]

VIROXIDE SUPER

Powerful broad-spectrum disinfectant
DEFRA approved (FMD, SVD, DoP and General Orders)
Proven effective against African Swine Fever
Peroxygen formulation for enhanced broad-spectrum disinfection
Non-resistant oxidative chemistry for speed of kill
Suitable for livestock housing, equipment, aerial fogging, misting and boot dip applications



NEOGEN develops and markets products dedicated to food and animal safety. NEOGEN's Animal Safety Division is a leader in the development of animal genomics, along with the manufacturing and distribution of a variety of animal healthcare products, including diagnostics, pharmaceuticals, veterinary instruments, wound care, hygiene products and aquaculture.

Your professional partner in biosecurity.

NEOGEN is continuously investing in its biosecurity ranges and is committed to delivering high quality products worldwide.

Poultry and Livestock:

High foaming detergents and pre-cleaners for animal housing and hatcheries. Broad-spectrum disinfectants for infectious disease control.



Food Processing:

Food-safe cleaners and disinfectants for processing equipment, tanks and pipelines to prevent microbial food contamination and help meet stringent food safety standards. Degreasers and descalants to remove stubborn deposits.



Dairy Hygiene:

Teat products to protect dairy cows against on-farm udder infections and hoofcare products for safe cleaning and disinfection of hooves. Cleaners and disinfectants for the highest level of hygiene in milking parlours both conventional and robotic, and bulk milk tanks.



Aquaculture:

Cleaners and disinfectants for disease control during grow-out production, egg disinfection and equipment sanitation to prevent the spread of disease and invasive species contamination.



Neogen® Viroxide Super

Strict biosecurity practices including good hygiene are essential to provide the highest level of protection against infectious livestock diseases on farm and in veterinary and zoological settings.

Neogen Viroxide Super, a peroxygen powder disinfectant, offers rapid broad-spectrum disinfection and speed of kill as part of terminal disinfection, continual disinfection and Emergency Disease Control programmes.

With increasing outbreaks of diseases known to cause economic hardship, Neogen Viroxide Super with its proven efficacy can be used as part of biosecurity protocols across a number of specific applications.

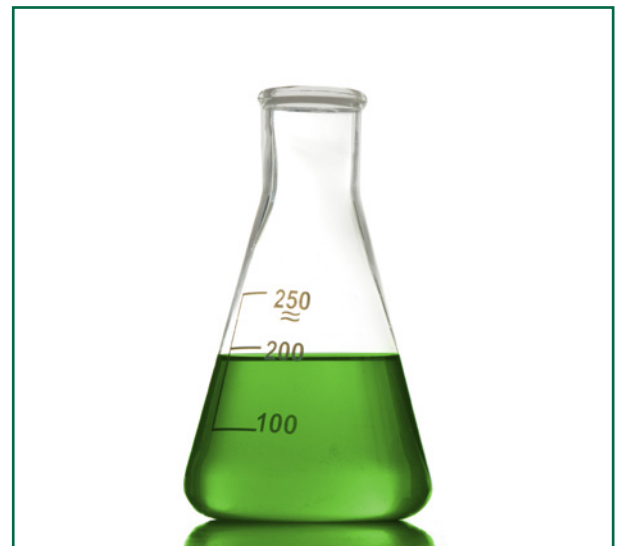
Neogen Viroxide Super is designed to support Emergency Disease Control and the global movement to reduce antibiotic use within the food chain.

Micro-organisms such as bacteria have been shown to develop resistance not just to antibiotics but to other chemistry types. Neogen Viroxide Super can continue to be used safe in the knowledge that no known organism has yet developed tolerance to repeated exposure of this chemistry.

Colour change indication

Upon dilution the Neogen Viroxide Super solution will be bright green in colour, fading to lighter green after several hours. The solution will remain active for up to 7 days but it is recommended that new solutions are made up every 3-4 days and unused solutions are disposed of correctly.

Neogen Viroxide Super Test Strips are available as a management tool for users to determine the concentration of in-use solutions of Neogen Viroxide Super.



In-use solution colour

Specification

Composition	A buffered blend of organic and inorganic compounds
Appearance	Free flowing off-white/green powder
Characteristic	Apple fragrance
pH Value	2.0 – 3.0 (1% solution)
Pack Size	1 kg, 2.5 kg, 5 kg and 10 kg tubs



How it works

Neogen Viroxide Super causes extensive damage to the protective mechanisms of microbial cells, causing irreversible damage and rapid kill of bacteria, viruses, fungi and spores.

- Superior oxidisation at low pH for speed of kill
- Buffered formulation to stabilise acid conditions to improve oxidisation
- Increased surfactant to aid disinfectant penetration and cleaning action
- Contains a short chain organic acid with properties known to interrupt the propagation of many viruses

Safety

- Components are readily biodegradable
- Neogen Viroxide Super is easy to transport (non-hazardous for transport)
- Formulated with a 'ready-for-use' colour indicator system
- Proven to be non-corrosive to skin
- Can be misted in the presence of livestock



Product applications

Neogen Viroxide Super can be used for disinfection of housing and equipment, boot dips, vehicles, as well as livestock drinking water systems and fogging and misting applications.

Neogen Viroxide Super is suitable for use on hard and porous surfaces and, under continuous biosecurity measures, may also be used in the presence of animals and users (subject to specific country regulations).



Application and use	Method	Dilution rate	
Routine surface disinfection	Pressure washer or mechanical sprayer	1:200	5g per litre
Routine surface disinfection under high organic load	Pressure washer or mechanical sprayer	1:100	10g per litre
Disinfection of equipment	Manual washing using a brush or pressure washer	1:200	5g per litre
Disinfection of equipment under high organic load	Manual washing using a brush or pressure washer	1:100	10g per litre
Treatment of livestock drinking water systems	Routine disinfection	1:100	10g per litre
Continuous treatment of livestock drinking water systems	Manual dosing into header tank or via dosing system	1:2000	500g per 1000 litres
Continuous treatment of livestock drinking water systems	Automatic dosing at 1% from stock solution	1:20	100g per 200 litres
Boot dipping	Solution should be replenished after 3-5 days	1:200	5g per litre
Boot dipping under heavy traffic or heavy soiling	Solution should be replenished after 3-5 days	1:100	10g per litre
Cold fogging	Mechanical mister at 1 litre per 10m ² of floor space	1:100	10g per litre
Thermal fogging	Thermal fogging machine	1:25	40g per litre



Terminal disinfection

Terminal disinfection is a vital part of a biosecurity programme to remove as many organisms as possible down to a level that is not harmful to livestock or human health.

A terminal disinfection programme should begin with the removal of all organic matter from surfaces and equipment. This is achieved by washing with a high quality pre-cleaner, such as Sureclean. Pre-cleaning removes all dried on residues, greases and fats where organisms can live. Once areas have been thoroughly cleaned, apply Neogen Viroxide Super at the recommended dilution and application rates on the label.

Application of Neogen Viroxide Super during terminal disinfection can be carried out using the following methods:

Porous and non porous surface disinfection of housing and equipment

Physical application of a prepared Neogen Viroxide Super solution to pre-cleaned surfaces can be carried out either automatically using a pressure washer, mechanically using a knapsack sprayer, or by soaking equipment.

Aerial misting, cold and thermal fogging applications

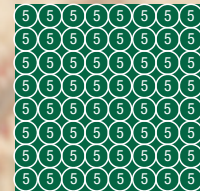
Application of Neogen Viroxide Super disinfectant using the dispersal of suspended particles in the air is an excellent means of controlling micro-organisms entering buildings and disinfecting inaccessible areas. The technique relies on the disinfectant particles being able to travel to the surface and then be in sufficient quantity to ensure coverage of that surface.

- **Aerial misting or spraying** using automated misting systems, a pressure washer or knapsack sprayer produces relatively large particles, which have a good ability to wet a surface and reduce residual dust, this is ideal for buildings with high ceilings.
- **Cold fogging** is carried out using a mechanical mister or ULV fogging machine, producing smaller particles circa 20 microns. Particles are able to travel further than misting or spraying. Cold fogging is a practical method for smaller building areas.
- **Thermal fogging** requires heating of the disinfectant to produce a highly visible fog, which is easy to control and covers a large space in a more efficient time-scale. Thermal fogging is particularly useful as a final terminal disinfection procedure once all pre-cleaned equipment and litter or bedding is in place. The extremely fine particles, typically 5 microns, can travel the furthest, distribute more evenly and provide the best penetration over all the aerial disinfection methods.

Average particle sizes (microns) and surface coverage

Thermal fogging

5



Cold fogging

20



Misting

50



Human hair

100

Smaller particles are able to travel and penetrate further with increased coverage.

Continuous disinfection

Good biosecurity control measures require the use of continuous biosecurity to maintain an environment that stops pathogens from taking hold. Continuous biosecurity is a management process and should be part of any HACCP policy to prevent the spread of unwanted organisms from place to place.

Boot dips

Boot dips are an effective way of preventing cross-contamination between sites and buildings. They are a visible means of both demonstrating a biosecurity protocol and ensuring participation of these procedures by both staff and visitors. Using a prepared Neogen Viroxide Super solution in a container large enough to accommodate appropriate footwear, the boot dip should be placed at farm and building entrances, along with a brush to remove large debris before dipping. An instruction sheet of how to use the dip must be located above the boot dip, so that all users are familiar with its correct use. Boot dips located in high foot-fall or heavily soiled areas should be considered for a higher concentration of disinfectant, see page 5.

Boot dips should be changed twice a week, or more if high footfall is expected.



Vehicle and wheel disinfection

Vehicles permitted to pass critical biosecurity control points must be disinfected to prevent cross contamination between sites. A Neogen Viroxide Super solution can be applied to the wheels and vehicles using an automated drive-through, a pressure washer, a knapsack sprayer or systems such as a drive-through wheel dip.

Cold and thermal fogging applications

Neogen Viroxide Super can be used in solution for cold and thermal fogging applications, as part of a continuous disinfection plan for preventative action of cross infection or during outbreaks of disease challenge. Cold and thermal fogging is safe to use in the presence of livestock and farm workers, if local regulation permits.

Drinking water treatment

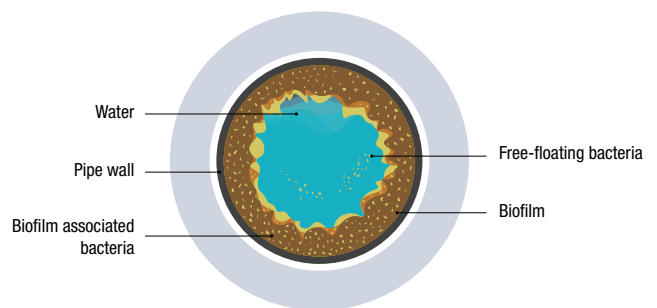
Contaminated water systems can harbour and support microbial life. Header tanks and other water storage solutions are areas where debris and dust accumulate, providing a breeding ground for pathogens to multiply and spread. The microbial quality of the water source, particularly non-mains supplies vary greatly and can potentially introduce pathogens into the drinking water if left untreated.

Neogen Viroxide Super can be added to storage tanks to improve overall water quality and for terminal disinfection of the water lines.

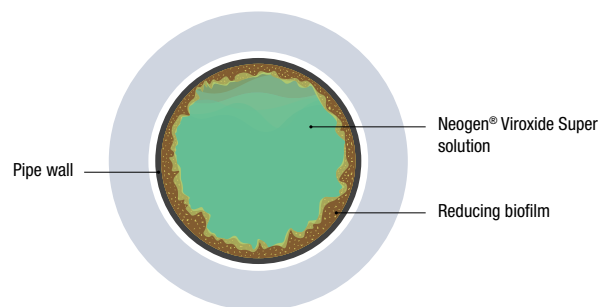
Continuous water disinfection with Neogen Viroxide Super consists of the uninterrupted application of disinfectant to the water lines using an automated dosing system. The aim is to reduce build up of scale and biofilm, maintaining pipe diameter, water flow and volume.



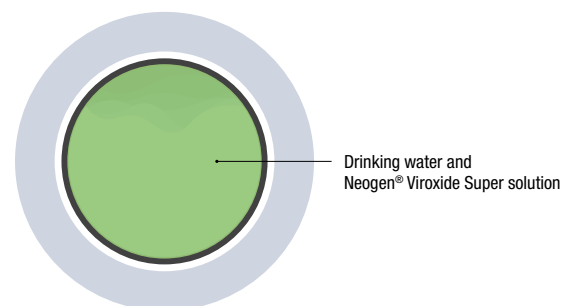
Untreated waterline clogged with biofilm



Neogen® Viroxide Super taking effect during waterline disinfection



Clean and clear waterline with continuous use of Neogen® Viroxide Super



Refer to the Neogen® Viroxide Super instructions for use for dilution rates relating to each application method.

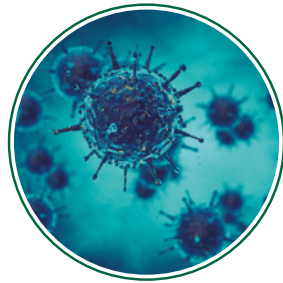
Biocidal efficacy

Neogen Viroxide Super is independently tested and proven effective against a wide range of disease causing organisms according to standardised test protocols.

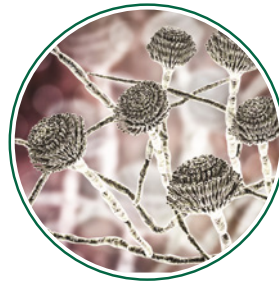
DEFRA Approval			
Type	Micro-organism	Disease	Dilution
FMD Orders	Foot and Mouth Disease virus	Foot and Mouth Disease	1:1300
SVD Orders	Swine Vesicular Disease virus	Swine Vesicular Disease	1:100
DoP Orders	Diseases of Poultry, Avian Influenza and Influenza of Avian Origin in mammals	Diseases of Poultry	1:200
General Orders	Salmonella enteritidis	Diseases of animals - various	1:100



Bacteria



Viruses



Fungi



Spores



Efficacy by species



General:				
Activity	Type	Micro-organism	Disease	Dilution
Bactericidal	Bacteria G-ve	Bordetella bronchiseptica	Infectious bronchitis	1:100
Bactericidal	Bacteria G-ve	Campylobacter jejuni	Intestinal infections	1:100
Bactericidal	Bacteria G-ve	Escherichia coli	Intestinal infections	1:100
Bactericidal	Bacteria G-ve	Klebsiella pneumoniae	Pneumonia	1:100
Bactericidal	Bacteria G-ve	Pasteurella multocida	Pneumonia, Atrophic Rhinitis, Fowl Cholera	1:200
Bactericidal	Bacteria G-ve	Proteus vulgaris	Various	1:100
Bactericidal	Bacteria G-ve	Pseudomonas aeruginosa	Mastitis	1:100
Bactericidal	Bacteria G-ve	Salmonella enteritidis	Salmonellosis	1:100
Bactericidal	Bacteria G-ve	Salmonella typhimurium	Paratyphoid	1:100
Bactericidal	Bacteria G+ve	Enterococcus hirae	Septicaemia	1:100
Bactericidal	Bacteria G+ve	Listeria monocytogenes	Septicaemia	1:100
Bactericidal	Bacteria G+ve	Staphylococcus aureus	Mastitis	1:100
Bactericidal	Bacteria G-ve	Escherichia coli	Intestinal infections	1:100
Bactericidal	Bacteria G-ve	Pseudomonas aeruginosa	Mastitis	1:100
Bactericidal	Bacteria G+ve	Enterococcus hirae	Septicaemia	1:100
Bactericidal	Bacteria G+ve	Staphylococcus aureus	Tenosynovitis	1:100
Fungicidal	Saccharomycetes	Candida albicans	Candidiasis	1:50
Mycobactericidal	Mycobacteriaceae	Mycobacterium avium	Respiratory diseases	1:100
Sporicidal	Bacteria G+ve	Bacillus cereus spores	Food poisoning	1:8.33
Sporicidal	Bacteria G+ve	Bacillus subtilis spores		1:10
Sporicidal	Bacteria G+ve	Clostridium perfringens	Enterotoxemia, Necrotising Enterocolitis Necrotic Enteritis	1:10

Bovine:				
Activity	Type	Micro-organism	Disease	Dilution
Virucidal	Flaviviridae	Pestivirus, BVDV-1	Bovine Viral Diarrheal Virus (BVDV)	1:250
Virucidal	Herpesviridae	Herpes virus surrogate	Infectious Bovine rhinotracheitis (IBR)	1:100
Virucidal	Picornaviridae	Bovine enterovirus-1 (ECBO)	Transmissible gastroenteritis coronavirus (TGEV)	1:500
Virucidal	Reoviridae	Rotavirus surrogate	Calf Rotavirus	1:100

Poultry:				
Activity	Type	Micro-organism	Disease	Dilution
Bactericidal	Bacteria G-ve	Bordetella avium	Bordetellosis	1:100
Bactericidal	Bacteria G-ve	Brachyspira spp.	Intestinal infections	1:100
Bactericidal	Bacteria G-ve	Ornithobacterium rhinotracheale	Respiratory disease	1:100
Bactericidal	Mollicutes	Mycoplasma gallisepticum	Chronic respiratory disease	1:100
Virucidal	Adenoviridae	Aviadenovirus surrogate	Egg Drop Syndrome	1:200
Virucidal	Birnaviridae	IBD virus surrogate	Infectious Bursal Disease (IBD), Gumboro	1:100
Virucidal	Coronaviridae	Coronavirus surrogate	Infectious Bronchitis; SARS, MERS	1:500
Virucidal	Herpesviridae	Herpes virus surrogate	Infectious laryngotracheitis (ILT)	1:100
Virucidal	Herpesviridae	Herpes virus surrogate	Marek's disease	1:100
Virucidal	Orthomyxoviridae	H5N1 strain	Avian Influenza	1:280
Virucidal	Poxviridae	Vaccinia virus MVA	Smallpox	1:200
Virucidal	Reoviridae	Avian reovirus surrogate	Avian Arthritis, Blue Wing disease	1:100

Equine:				
Activity	Type	Micro-organism	Disease	Dilution
Bactericidal	Bacteria G+ve	Streptococcus equi	Strangles	1:100

Swine:				
Activity	Type	Micro-organism	Disease	Dilution
Virucidal	Coronaviridae	Coronavirus surrogate	Porcine epidemic diarrhea virus (PEDV)	1:500
Virucidal	Coronaviridae	Coronavirus surrogate	Transmissible gastroenteritis coronavirus (TGEV)	1:500
Virucidal	Herpesviridae	Herpes virus surrogate	Aujeskys disease, Pseudorabies	1:100
Virucidal	Orthomyxoviridae	H1N1 strain	Swine Influenza	1:200
Virucidal	Picornaviridae	Enterovirus	SVD	1:100
Virucidal	Togaviridae	Coronavirus surrogate	Porcine Respiratory & Reproductive Syndrome (PRRS)	1:500
Bactericidal	Bacteria G+ve	Erysipelothrix rhusiopathiae	Diamond skin disease	1:100
Bactericidal	Bacteria G+ve	Streptococcus suis	Septicaemia	1:100
Virucidal	Asfarviridae	ASFv	African Swine Fever	1:800

ASF MARKET-LEADING DILUTION AND CONTACT TIME (5 MINS)

Dilution guide

Quantity of water	Quantity of Neogen Viroxide Super powder:				
	0.05% dilution 1:2000	1% dilution 1:100	2% dilution 1:50	4% dilution 1:25	5% dilution 1:20
1 litre	0.5g	10g	20g	40g	50g
10 litres	5g	100g	200g	400g	500g
30 litres	15g	300g	600g	1200g	1500g

WHY CHOOSE



- ✓ **Independently laboratory tested with proven rapid action against bacteria, viruses, fungi and spores**
 - **Independently tested for virucidal activity (BS EN 14675)**
 - **Proven activity against bacteria (BS EN 1656 and BS EN 1276), fungi (BS EN 1657) and spores (BS EN 13704)**
- ✓ **DEFRA approved (FMD, SVD, DoP and General Orders)**
- ✓ **Proven effective against African Swine Fever at market leading dilution rate**
- ✓ **Complete disinfectant product for hard surfaces, equipment, livestock housing, vehicles, boot dips, aerial fogging and misting applications**
- ✓ **Safe to use in the presence of livestock and farm workers during aerial disinfection**
- ✓ **Superior oxidisation for speed of kill**
- ✓ **Efficacious in hard water areas**
- ✓ **Increased surfactant to aid pathogen penetration and cleaning action**
- ✓ **Reduces build up of scale and biofilm, maintaining pipe diameter, water flow and volume**
- ✓ **Suitable for drinking water systems**
- ✓ **Can be used in all terminal or continual disinfection programmes**



Manufactured in the UK by Quat-Chem Ltd. a NEOGEN® company

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EN ISO 9001:2015 QMS GMP ISO 22716:2007