# **EVANS VANODINE**DAIRY HYGIENE











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# INTRODUCTION

An effective hygiene programme is essential in the modern dairy farm, to aid the production of quality milk and meet the highest standards of livestock protection.

Mastitis, an inflammation of the udder, is caused by a microbial infection, leading to increased numbers of somatic cells and bacteria in milk. Prevention of Mastitis is vital in maximising the quantity and quality of milk produced.

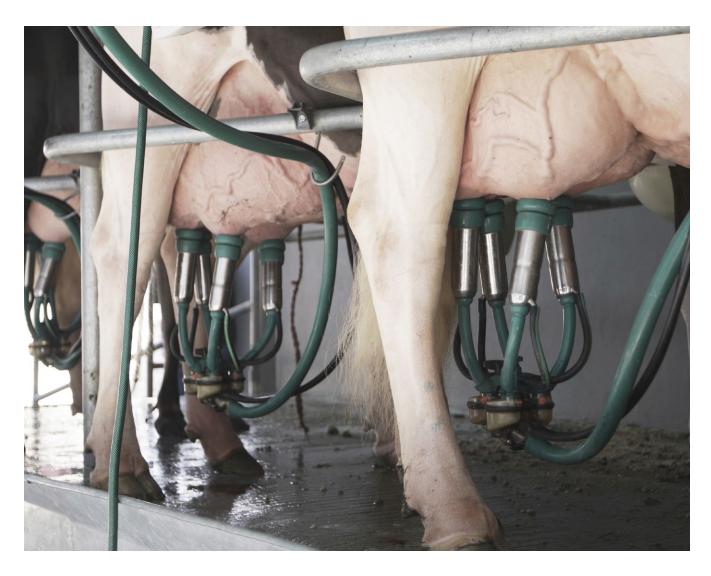
Mastitis causing micro-organisms are transmitted between cows during milking and in housing. To prevent this transmission of bacteria, a system must be in place which focuses on the cow's environment; protecting the teats and milking machinery.

Pre-milking, teats must be cleaned and disinfected to remove organic soiling and micro-organisms.

Post-milking, teats must be dipped or sprayed immediately, with a teat disinfectant which has the capacity to kill mastitis pathogens whilst ensuring good teat condition.

When cleaning machinery after milking, all residues must be removed to prevent the growth of bacteria which can lead to future milk contamination. Products used must remove protein and fat whilst aiming to control the build-up of milkstone.

The implementation of an effective hygiene programme with good machine maintenance, in addition to accurate mastitis records and dry cow therapy, has been demonstrated to reduce incidences of mastitis.



# MILKING PROCESS

### PRE-DIP™

lodophor pre-dip and spray



- Authorised Biocide.
- Passes EN\* 1656 within 15 seconds.
- Ready-to-use, pre-milking dip or spray.
- Designed specifically for teat disinfection.
- Contains 1,000ppm iodine.
- Reduces teat contamination; resulting in lower bacteria levels.

#### **EVAFOAM™**

Pre/post-milking teat disinfectant



- Passes EN 1656: tested against common mastitis causing pathogens.
- Can be used as a dip, spray or foam.
- Contains the biocides chlorhexidine gluconate and lactic acid.
- Contains allantoin and glycerol to help smooth and soften the skin.

### PRE-POST GOLD™

Pre and post teat disinfectant



- Authorised Biocide.
- Passes EN 1656; provides protection against environmental bacteria.
- Ready-to-use, highly visible teat dip or spray.
- Fast-acting halogen complex.
- High levels of emollients to help soften the skin.

#### **FOUR SEASONS** MASODIP® Teat disinfectant





- Formulated with chlorhexidine gluconate and lactic acid.
- Bactericidal action; passes EN 1656.
- Ready-to-use formulation; ideal where measurement and mixing are likely to prove inconvenient.
- Suitable for use as a dip or spray.
- Contains 10% glycerol for good skin conditioning.

#### MASODINE®1:3 General use teat dip/spray





- Authorised medicinal product.
- Concentrated iodophor teat dip/spray.
- Contains 5% emollient when diluted; helps to prevent sore teats.
- Very effective against all mastitis causing bacteria.

### **MASOCARE®**

High emollient teat dip/spray





- Authorised medicinal product.
- 10% emollients for good teat condition.
- Reduces the risk of infection.
- Ready to use formulation: ideal where measurement and mixing are likely to prove inconvenient.

## MASOCARE®1:4

High emollient teat dip/spray





- Authorised medicinal product.
- Concentrated teat dip/spray.
- Helps prevent teat cracking and soreness.
- Economical; 20 L makes 100 L ready to use solution.
- Effective in the control of mastitis in adverse weather conditions.

# **MASOCARE® EXTRA**

Ultra high emollient teat dip/spray





- Authorised medicinal product.
- Ultra high levels of emollient 12%.
- Offers protection in severe weather conditions.
- Can also help with the recovery of an injured teat.

# **VISQODIP™**

Thickened teat dip





- Authorised biocide.
- Authorised medicinal product.
- Unique thickened formulation. Passes FN 1656.
- Highly visible and non-drip; extends contact time of disinfectant.
- Contains 9% glycerol and sorbitol.
- Effective in the control of mastitis.

#### **MASOFILM®** Barrier disinfectant





- Authorised biocide.
- Passes EN 1656.
- Ready to use barrier film.
- Excellent film-forming properties. Teat end protection in between
- High levels of emollients 10%.
- Helps prevent environmental mastitis

# PV-PRO®

Sprayable barrier disinfectant





- Authorised biocide.
- Passes EN 1656.
- PVP iodine; as used in hospitals, with 10% alveerol and sorbitol.
- Ultra gentle on skin; provides excellent skin protection.
- Forms a barrier-film to protect teats for up to 12 hours between milkings.





# CLEAN TEATS AND UDDERS OBSERVATION / INSPECTION / IDENTIFICATION

# ENSURE MILKING PARLOUR IS CLEAN BEFORE ALLOWING THE ANIMALS TO ENTER STALLS

- Make sure hands are clean by washing with soap and water, or using *Handsan™* if no water is available.
- Examine the udder for swelling, heat or pain, and check the foremilk from each teat prior to every milking, allowing early detection of mastitis.
- 3. Ensure teats are clean and dry before the use of a teat disinfectant.
- Use a pre-milking disinfectant for teats (*Pre-dip™*, *Evafoam™* etc). This will help to stimulate the milk flow.
- Teats must be cleaned and dried completely with an individual paper towel. This allows the milking cluster to stay firmly attached and prevent possible contamination of the milk, due to bacteria being present on damp or wet teats and udders.

# VOLUMES REQUIRED FOR CORRECT DILUTION OF TEAT DIPS

MASODINE® 1:3		WATER		TOTAL Volume	DILUTION
5 Litres	+	15 Litres	=	20 Litres	1:3

MASODINE® 1:4		WATER		TOTAL Volume	DILUTION
5 Litres	+	20 Litres	=	25 Litres	1:4

Appropriate personal protective equipment (PPE) must be worn during all stages of the milking process including:

overalls, apron, cap, gloves and milking sleeves



### **MILKING**

#### **INFECTED ANIMALS SHOULD BE MILKED LAST**

- Attach the milking unit within 2 minutes of stimulation, pre-milking dipping/spraying. This time allows the milk letdown reflex to occur for the most efficient removal of milk.
- 2. Keep milk from antibiotic treated animals or infected animals out of the bulk tank.
- 3. Ensure correct positioning of cluster.
- 4. Observe teats after cluster removal to check for signs of vacuum fluctuations.
- 5. If clusters fall on the floor, hose down and wash in Fam® 30 or Peradox™ solution before next use.



# **DISINFECTION**DIP OR SPRAY TEATS

# TO BE CARRIED OUT ON EVERY TEAT OF EVERY ANIMAL

- Immediately after milking, dip or spray each teat of every animal with the selected disinfectant (Masodine® 1:3, Masocare®, Masofilm® etc).
- 2. Ensure that the entire surface of the teat is covered with the disinfectant solution.
- 3. Keep the milked animals standing for 30 minutes after milking to allow the teat canals to close.
- 4. At the end of the milking process, used disinfectant solution should be discarded and teat dip cups should be cleaned.
- 5. A fresh solution should be prepared for each milking session.

Keep the milking parlour floors, walk ways and holding areas free of dung and dirty water to avoid contamination.



# CIRCULATION CLEANING

#### **VANOSAN®**

Chlorinated pipeline/DX tank cleaner



- Strong caustic/chlorine based formulation.
- De-fats, cleans, suspends and carries soil away.
- May be used as part of an acid/alkali wash programme.
- Suitable for use in robotic parlours.

#### **VANORINSE®**

Chlorinated pipeline sanitiser



- Mixes easily, is non-foaming and rinses freely.
- De-fats and protects rubbers.
- Economical in use, effective in all water conditions.

#### METRON® / CRYSTAL™

Powder circulation cleaner



- Chlorinated, caustic powder.
- Contains sodium hydroxide.
- Effective sequestrant system for all water hardnesses.
- Metron® contains metasilicate for better fat removal.

#### **CIP LIQUID**

Chlorine free caustic based detergent





- Highly alkaline, low foam cleaner.
- Removes fats, oils and protein deposits.
- May be used in single stage or multi-stage CIP process.
- For a wide range of applications including robotic milking systems.

#### **COLDWASH**

Circulation cleaner



- Highly caustic; for manual or cold water circulation systems.
- Quick dissolving, non-foaming cleaner.
- Mixes easily and is free rinsing.
- Can be used in hot or cold and hard or soft water conditions.

### **EVANS HYPOCHLORITE**





- Fast bactericidal action.
- For routine disinfection of milking parlours, pipelines, utensils and general cleaned surfaces.
- Use in final rinse of in-place disinfection programmes.

#### **FILTER CLEANER**





101

- Formulated as a strong cleaner for re-usable, in-line milk filters.
- For the prevention and removal of protein and milkstone deposits.
- Added softeners for hard water areas.
- Efficient caustic based cleaner.
- Simple 1:1 usage ratio.

#### SHIFT

Heavy duty power wash liquid



- Heavy duty, detergent cleaner.
- Can be applied as a foam.
- Rapidly penetrates and removes organic soiling.
- Suitable for cleaning buildings, vehicles and equipment.
- For use with pressure washers.

#### **GP ACID™**

Milkstone remover/descaler



- Fast acting acid-based descaler.
- Prevents milkstone build-up.
- For pipelines, equipment and bulk tanks
- Low foaming and quick rinsing.
- Suitable for parlour wash routine.

### **MULTI-ACID™**

Blended acid detergent/descaler



- Nitric and phosphoric acid blend to provide a synergistic action.
- Rapid, effective scale removal.
- Effective in ABW plants.
- Economical night wash.

### **PERADOX™**

Peracetic acid based disinfectant



- Passes EN\* 1656 within 15 seconds
- Formulated for disinfecting drinking water pipes and tanks.
- Removes biofilm.
- Fast acting, economical in use.
- A clear, colourless liquid terminal
- Suitable for use in all water types.

#### **FAM® 30**

lodophor disinfectant; BPR Approved



- Authorised Biocide.
- Passes EN 1656, EN 1657, EN 14349 and EN 14675.
- Bactericidal, virucidal and veasticidal.
- Active in the presence of organic matter.
- Biodegradable and stable.





#### **WASH DOWN**

LOW PRESSURE WASHING

# ENSURE MILKING PARLOUR IS RINSED DOWN BEFORE CIRCULATION CLEANING BEGINS

- After milking, clean the parlour using Shift with a low pressure washer to remove debris from liners, clusters, long milk and pulse tubes.
- Ensure all external surfaces of equipment are washed down prior to hot water circulation cleaning. This avoids faecal matter being baked onto the equipment and the temperature of the hot cleaning solution being lowered as the cold water is used to clean the exterior pipework and clusters.
- After the clusters have been cleaned, reattach
  to the jetters ready for the circulation cleaning
  procedure, as they may have become soiled
  during the previous milking session and could
  introduce contamination into the circulation
  solution.



# PARLOUR CIRCULATION CLEANING

#### FOR AUTOMATIC AND MANUAL SYSTEMS

- Pre-rinse the system with warm water (38-43°C), use 8-10 Its per unit, to remove all traces of milk.
- Wash the outside of the milking equipment with warm water and Fam® 30; checking for damaged or worn components. Soak filters in Filter Cleaner if necessary.
- Run hot water (80°C) through the system, using about 4 lts per unit, until it discharges hot (50°C).
- Prepare circulation cleaner solution (Crystal™ Metron®, Vanosan™ etc) in hot water (80°C). Draw solution into the plant allowing it to discharge to waste until the temperature of the discharge is at least 50°C.
- Allow solution to circulate for 10-15 minutes before discharging to waste. Evans Hypochlorite or Peradox™ may be added to the final rinse.
- Periodic use of *GP Acid™* or *Multi Acid™* will keep pipes in good condition.



#### **BULK TANK SANITISING**

#### MANUAL SANITISING

- Immediately after the tank has been emptied, rinse with cold water to remove milk residues.
- Place plug, dip stick etc in a solution of Crystal™ or Vanosan™ and manually scrub clean. Rinse with cold water and allow to air dry.
- Thoroughly brush all interior surfaces of the tank with the selected sanitiser (*Crystal™* or *Vanosan™*) allowing at least 2 minutes contact time.
- 4. Pay particular attention to the underside of the bridge and tank covers.
- 5. Allow solution to collect in the outlet and brush while running to waste.
- 6. Thoroughly hose down the tank and lids with clean, cold water and allow to drain completely.

#### **AUTOMATIC SANITISING**

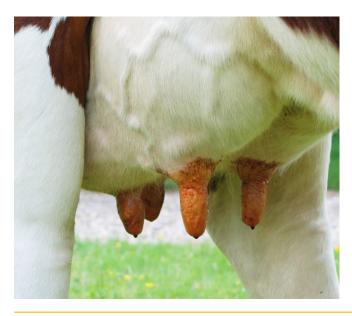
- 1. Immediately after the tank has been emptied, rinse with cold water to remove milk residues.
- Allow the prepared solution of sanitiser (*Crystal*™ or *Vanosan*™) to circulate for 15-20 minutes in the tank. Run to waste.
- 3. Rinse with clean, fresh water and allow to drain.



# CLEANING AND SANITISING ANIMAL HOUSING

- Keep cubicles and bedding as dry as possible by mucking out and changing bedding regularly.
- Clean all surfaces using Shift (1:150) by foam or pressure washing.
- Use Fam® 30 (1:100) to disinfect walkways, milking parlour floors and stalls. Brush and wash out regularly to prevent build-up of soil.
- Use Fam® 30 (1:100) to disinfect calving pens after calving. Apply manually or with power washer.
- Use Fam® 30 (up to 1:100) in wheel and foot baths.

# MASTITIS PREVENTION



#### RECOGNISE THE RISKS

Mastitis is an inflammation of the mammary gland and udder tissue, and is a common disease of dairy animals.

It usually occurs as an immune response to bacterial infection of the teat canal from a variety of microbial sources present on the farm and can also occur as a result of chemical, mechanical or thermal injury to the animal's udder.

- Mastitis is still a serious problem.
- The requirements for milk quality are changing all the time.
- Mastitis has a serious economic impact of dairy profitability.
- A mastitis prevention programme is essential.

#### RECOGNISE THE CAUSES - The two main types of mastitis are:



#### Contagious

Sources of bacteria				
Bacteria	Sources			
Staphylococcus aureus	Mammary gland			
Streptococcus agalactiae	Udder, teat canal			
Streptococcus dysgalactiae	Chaps, cuts of teat skin, tonsils, carrier fly Hydrotaea irritans			





#### **Environmental**

Sources of bacteria				
Bacteria	Sources			
Staphylococcus species eg, S. xylosus, S. epidermidis	Environment, human skin			
Streptococcus dysgalactiae	Chaps, cuts of teat skin, tonsils, carrier fly Hydrotaea irritans			
Streptococcus uberis	Straw yards, legs, hind teats, lips of cows			
Escherichia coli	Faeces			
Bacillus species	Brewers grain, silage			
Pseudomonas aeruginosa	Dirty water			

#### PREVENTION - The six point plan:



#### **PRE MILKING DISINFECTION**

Teat dipping or spraying

Examine the udder for swelling, heat or pain and check the foremilk from each teat to allow for early detection of mastitis.



#### **TREAT AND RECORD ALL** CLINICAL **CASES OF MASTITIS**

All cases of mastitis should be recorded. including date of observation, animal identity, treatment and details of response to treatment.



#### **POST MILKING DISINFECTION**

Teat dipping or spraying

All animals should receive disinfection of the teats after milking. Any animals with mastitis are milked last and a fresh solution should be used.



#### **DRY COW THERAPY**

For the treatment of animals at the end of lactation, the use of antibiotics should only be used to cure and prevent new infections during the vulnerable dry period.



#### CULL CHRONIC CASES



#### **MILK MACHINE MAINTENANCE**

For animals that have severe or repeated infections and are not responding well to treatment.

To help prevent bacterial contamination from one animal to another, and also to prevent overmilking and teat damage, including hyperkeratosis.



#### **PREPARATION**

Keep holding areas as clean as possible - free of dung, dirty water etc.

Clean teats and udders with an appropriate medicated wipe or udder wash and disposable paper towel.

Foremilk.

Pre-dip with an appropriate teat dip.

Dry wipe.



#### **MILKING**

#### Wear clean PPE

Wear gloves and change at regular intervals. If not wearing gloves, wash hands or use hand sanitiser at regular intervals and after milking infected animals.

#### Milk infected animals last

Keep infected milk or milk from antibiotic treated animals out of the bulk tank.

#### Wash clusters

If clusters fall on the floor, or equipment becomes soiled during the milking process, it will need to be washed off using water that contains a disinfectant (*Fam® 30* or *Peradox™*) before next use.



#### **TEAT DIPPING/SPRAYING**

#### Immediately after milking

Dip or spray the full length of each teat. Ensure the entire surface of the teat is covered. Treat damaged or sore teats with an udder salve, cream or ointment.

#### After milking

Keep animals standing for 30 minutes after milking.
Empty and wash teat dip cups.



#### **ENVIRONMENTAL HYGIENE**

Ensure walkways and collecting yards are kept as clean and dry as possible.

Use automatic scrapers where possible.

Wash using **Shift** detergent at 1:150 through a pressure washer or as a foam.

Clean and disinfect farm vehicles and equipment on a regular basis.

Drain and prevent pools or areas of standing water.

#### Foot and wheel baths

Fill with *Fam® 30*, diluted 1:100. Clean out and re-fill regularly.



# CLEANING AND DISINFECTION OF ANIMAL HOUSING

Maintain farm buildings in good condition.

#### Cubicle bedding

Muck out and change regularly.

#### Disinfection

Remove all soiling before applying disinfectant. Use *Fam® 30* diluted 1:100 for walkways, milking parlour, calving pens, floors and stalls.



# BIOSECURITY PROGRAMMES

#### Wear clean PPE

Wear gloves, change at regular intervals, if not wearing gloves, wash hands or use hand sanitiser at regular intervals and after milking infected animals.

#### Critical Control Points

Every farm has different needs and requirements.

Identify each Critical Control Point (CCP) on the farm.

Develop a plan to control the risk at each point.

Implement the plan and record the actions.

Audit the records.

Train your staff to follow the plan.

# GENERAL TEAT CARE PRODUCTS

#### LACT-8™ Chlorhexidine gluconate and lactic acid





- Easy to use, long lasting barrier film.
- Highly visible pink colour to indicate which animals have been dipped.
- The high levels of glycerin and allantoin help to soothe and soften the skin, reducing cracks and crevices where bacteria may multiply.
- Bactericidal action; passes EN 1656.

#### **ALLANTOCARE™**

Conditioning teat disinfectant





- Authorised Biocide.
- Ready-to-use pre/post teat disinfectant.
- Dual halogen complex
- Rapid bactericidal action; Passes EN 1656.
- Contains allantoin; helps soothe and soften the skin, reducing cracks and crevices where bacteria may multiply.

#### **PRO-TEC™ 1:3** Concentrate conditioning teat dip





- Authorised Biocide.
- Concentrated, dual halogen pre/post milking teat disinfectant.
- Effective against a wide range of mastitis causing organisms.
- Bactericidal action; passes EN 1656.
- Highly visible, dark brown formulation.

### **CONTACT™**

lodophor pre/post teat disinfectant





- Authorised Biocide.
- Ready-to-use teat dip/spray.
- Dual halogen complex.
- Rapid bactericidal action: Passes EN 1656.
- Sprayable, thickened formulation.
- Intense dark brown colour allows quick and easy identification of dipped or sprayed animals.

# SUPA-MAX™

Chlorhexidine gluconate and lactic acid





- Ready-to-use teat dip/spray.
- Rapid bactericidal action; Passes EN 1656.
- Long lasting, dark blue colour.
- Produces a durable, pre-milking routine foam.
- Ideal for pre and post milking
- Formulated to balance the pH of the

### PROTECT YOUR LIVESTOCK WITH TREES

Planting trees on farms can benefit your livestock, as well as helping with sustainability goals. Other benefits include;

WILDLIFE - Trees provide shade and shelter for livestock and create a diverse habitat for many other species of birds and animals.

WATER - Fish and other aquatic animals benefit from trees, as they reduce erosion and filter pollutants from agricultural run-off and groundwater.

AIR - Trees help reduce offensive odours and absorb carbon dioxide.

SOIL STRUCTURE - Deep roots bring up minerals and nutrients from deep down in the soil. Leaves help to increase the soil's organic matter, encouraging worms, improving soil structure and aiding drainage.

PLANTS - Trees in an agricultural setting provide greater plant diversity, making for a healthier ecosystem.

TREES - Some trees have NSAIDs which can provide pain relief and some produce tannins which can help control flies and worms.

**HUMANS** - Trees create a more aesthetically pleasing landscape and create settings for both active and passive outdoor activities.



# ADDITIONAL PRODUCTS



# **CLEANSAN™**

**Detergent for cluster flush systems** 





- Detergent for cluster flush and teat-brush systems.
- Concentrated, QAC-free detergent.
- Effectively cleans clusters between each animal.
- Formulated without peracetic acid; less corrosion.
- Highly effective at cleaning teats through teat-brush systems.

### **TRIDENT**

Manual sanitising powder



- For manual cleaning and sanitising of stainless steel bulk milk tanks, dairy utensils and equipment.
- Provides over 10,000ppm available chlorine to ensure adequate strength.
- Free flowing, non-abrasive blue powder which mixes readily into a paste.
- Economical in use.

# ACID-BRITE™

Concentrated dairy plant acid cleaner





- For cleaning and descaling all types of bulk tanks and dairy equipment.
- Removes cream line and milkstone in tanks, reducing the need for manual cleaning.
- Organic acid; gentle on substrates, strong on milk scales.
- Surfactant assisted acid.
- May be used hot or cold in all types of water hardness.

### **ACID WASH™**

Automated milking unit cleaner





- For descaling and removing milkstone from robotic milking systems, pipelines, equipment and bulk tanks.
- Fast acting, acid-based formulation.
- Suitable for all types of milking robots and tanks.
- Low-foaming, quick rinsing formulation.
- Recommended for alternating acid/ alkali wash programmes.

#### **SHOW OFF**

Superior animal shampoo



- Cleansing shampoo for cattle, goats, sheep, horses and pets.
- Helps the coat to retain its shine and gloss.
- Soapless nature, leaves no grease or scum.
- Effective in all water conditions.

### HANDSAN™

70% alcohol-based hand disinfectant





- Authorised Biocide.
- Bactericidal, virucidal and yeasticidal.
- Passes EN 1500, EN 13727 and EN 1276 with a 30 second contact time.
- Passes EN 14476 against enveloped viruses, including Coronavirus, with a 1 minute contact time.
- Added moisturiser to protect skin.
- Evaporates without leaving a residue.
- Ideal for use where soap and water are not readily available.

# TARGET™ POWERGEL

Alkaline foam/gel cleaner





- Foam/gel cleaner for livestock housing.
- For rapid removal of organic soil.
- Increased surface contact time gives excellent organic soil penetration.
- Suitable for all types of livestock housing.
- Ideal for all types of pressure washers.
- Should be used with a suitable foam



# **EVANS VANODINE**

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#### **AUTHORISED BIOCIDES:**

Allantocare™ UK-2019-1187-4-0001 UK-2019-1187-4-0004 Contact™ Fam® 30 UK-2019-1179-02 Handsan™ UK-2019-1195-0001 Masofilm® UK-2019-1187-3-0001 Pre-Dip™ UK-2019-1187-1-0001 Pre-Post Gold™ UK-2019-1187-4-0002 Pro-tec<sup>™</sup> 1:3 UK-2019-1187-6a-0001 PV Pro® UK-2019-1187-2-0001 Visqodip™ UK-2019-1187-3-0003

#### **AUTHORISED MEDICINE (VMD):**

 Masocare®
 03940/4010

 Masocare® 1:4
 03940/4053

 Masocare® Extra
 03940/4085

 Masodine® 1:3
 03940/4006

 Visqodip™
 03940/4066

 ${\bf FAM^{@}~30}$  is authorised under The European Biocidal Products Regulation for specific uses at a dilution of 1:100.

In the UK  ${\sf FAM}^{\circ}$  30 is approved by DEFRA under The Diseases of Animals Act for use in the event of a notifiable disease outbreak at the following dilutions:

Diseases of Poultry order 1:100
Foot and Mouth order 1:550
General orders 1:49
Swine Vesicular order 1:100
Tuberculosis order 1:20





