

FarmCareGB

Biosecurity Shields For All Livestock



CLEANER

# Mite-Gard



*Multi-purpose Cleaner*



For Cleaning Livestock Housing and Equipment Eliminating all Organic Matter Including Parasites such as Red Mites.

# Mite-Gard

## General Properties

Mite-Gard is a development of a common technology employing both Quaternary ammonium compounds with a blend of cationic, amphoteric and non-ionic surface active agents and water conditioners with additional poly(hexamethyleneguanide) hydrochloride. This gives Mite-Gard an extensive spectrum of biocidal activity in a non-specific mode of action which prevents the problems associated with bacterial resistance. Mite-Gard exhibits stability over a wide range of pH ensuring compatibility with other stages of farm cleanout procedures. Mite-Gard's most important property lies in its insecticidal activity where kill levels of 100% can be achieved on poultry red mite (*Dermanyssus gallinae*) and their eggs without the use of traditional insecticidal compounds such as organo-phosphates and organo-chlorines. The application of Mite-Gard on red mite can lead to eradication, improved bird performance and lower mortality.

## Instructions For Use

Stage 1, Before de-population of the unit, spray liberally with a 10% solution of Poultry-Shield to equipment and nesting areas. (This also gives a comfortable environment when removing equipment manually)

Stage 2, Remove all equipment from the unit (free-range) and all plastic slats, as interlocking joints can harbour eggs and immature mites.

Stage 3, The unit and equipment must be washed to a clinical standard removing all litter and manure from every area; thus removing as many mites as possible.

Stage 4, Once the new crop of birds are in and the unit temperature is as required, spray with a 10% solution of Poultry-Shield as mites will become very active especially if the unit has been empty for a long period of time.

Stage 5, Routine Spraying with a 10% solution must be done every 4-6 weeks without fail, even if mites are not visible.

## Chemical and Physical Properties.

Mite-Gard is clear colourless aqueous blend of cationic, amphoteric and non-ionic surface active agents and water conditioners with quaternary ammonium compounds, polybiguanide hydrochloride and primary fatty alcohol ethoxylate. Boiling point of 100°C, Specific gravity of 1.03, freezing point of 0°C and a pH of 12.0 to 12.8. Mite-Gard is generally stable over a wide range of temperatures. Can be inactivated by soap and surface active agents (if in doubt contact the manufacturer).

## Efficacy

The formulation of Mite-Gard has been shown in independent trials to have a wide spread biocidal activity against insects, bacteria, viruses and fungi. These are summarised below:

### Red Mite Bioassay

Fresh-Shield was applied at various concentrations for exposure times ranging from 4 hours to 140 hours. In comparison with High-cis Cypermethrin, Fresh-Shield showed up to 96.87% (corrected mean percent mortality) against 100% for Cypermethrin after 48 hours. Source CVL Weybridge. (Mite-Gard is a more concentrated version of Fresh-Shield, in field tests Mite-Gard has demonstrated similar results at 10% concentration. With Mite-Gard the results are instant)

## Bacteriacidal activity

Testing against Vancomycin resistant *Streptococcus faecalis* (Vancomycin resistant enterococcus, VRE) and Methicillin-resistant *Staphylococcus aureus* at a 10% solution, showed the formulation of Mite-Gard to be highly effective (European Suspension Test). Source University of Leicester. The trials were summarised by Professor Steven Myint, Professor of Clinical Microbiology as follows:

"At 1:10 dilution both solutions have bactericidal activity against MRSA and VRA in the presence of a small amount of protein. This would be consistent with adequate disinfection in the presence of low levels of organic materials."

When tested against *Mycobacterium smegmatis* (an organism with identical physicochemical properties to *Mycobacterium tuberculosis*) the conclusion to the trials was that the product was "effective at 10% dilution."

Using a modified Kelsey Sykes test (BS6905:1987), the formulation of Mite-Gard was tested for efficacy against *Listeria monocytogenes* ATCC 19117, *Salmonella typhimurium* NCTC74, *Pseudomonas aeruginosa* NCTC6749, *E. coli* NCTC8196 and *Shigella sonnei* ATCC25931. The trial conclusions were that "the disinfectant passed the challenge tests on three successive occasions at its in use concentration. Source Microspec Laboratories Ltd. It should be noted that the modified Kelsey Sykes test takes account of organic debris."

## Virucidal activity

The formulation of Mite-Gard was tested against Poliovirus type 1, Herpes simplex type 1 and human type Hepatitis B virus. Source University of Leicester. The trials were summarised by Professor Steven Myint, Professor of Clinical Microbiology as follows:

"In conclusion, at supplied concentration, the product has virucidal activity within a sixty minute exposure period. In the case of Hepatitis B, this is in the presence of serum." And "It is, however notable that the results of these disinfectants were superior to those obtained for a hypochlorite-containing compound PreseptR"

## Fungicidal activity

Testing against a clinical isolate of *Trichophyton rubrum* using a modified Kelsey Sykes (modified from BS6905:1987 to allow anti-fungal activity to be assessed), showed the formulation of Mite-Gard to pass the test on three successive occasions. Source Microspec Laboratories Ltd

## Precautions

- 1 Wear suitable protective clothing
- 2 Irritant for eyes and skin
- 3 Keep out of reach of children
- 4 In case of contact with eyes, rinse immediately with plenty of water
- 5 Wear suitable protective clothing, gloves and eye/face protection
- 6 In case of skin contact wash off with water, seek medical advice