



# BIOACTIVE FILTER TREATMENT

PATENTED TECHNOLOGY FOR USE ON HVAC FILTERS

## CLEANER FILTERS IMPROVE INDOOR AIR QUALITY AND PERFORMANCE OF HVAC SYSTEMS

Over time the filters of HVAC systems can become dirty as the air moving over the surface contain dirt, dust, pollen, moisture mould and odour causing bacteria. A build-up of mould and odour causing bacteria decreases the airflow across the filter, increasing the pressure drop and leading to excess energy consumption reducing the efficiency of the heat transfer process, leading to excess energy consumption.

## PRODUCT OVERVIEW

The **AerisGuard™ Bioactive Filter Treatment** is applied to air filters at the time of installation or to existing filters. The filter treatment is based on patented technology that ensures slow migration of active compound into dust particles trapped within the filter. Dust particles provides a source of nutrients for odour-causing bacteria and mould, which rapidly grow colonies in untreated air filters. Towards the end of its working life, a typical filter is highly contaminated. Aside from the potential human health consequences, the proliferation of the mould and odour causing bacteria ultimately leads to the filter becoming blocked.

Application of the **AerisGuard™ Bioactive Filter Treatment** dramatically reduces mould and odour-causing bacteria growth. Thereby extending the filter life, improving dust retention, reducing energy consumption and improving indoor air quality.

- ✓ Improves airflow up to 300%
- ✓ Passes ASTM E1053
- ✓ DA19 compliance for maintenance
- ✓ Prolong asset & equipment life
- ✓ Reduce energy consumption through correct airflow
- ✓ USEPA Registered

## Get the Aeris Advantage!

- ▶ READILY BIODEGRADABLE
- ▶ UP TO 12 MONTHS PROTECTION
- ▶ HIGHLY EFFECTIVE



### PRODUCT NOTES

- Refer to SDS-005-US AerisGUARD™ Bioactive Filter Treatment



# BIOACTIVE FILTER TREATMENT

PATENTED TECHNOLOGY FOR USE ON HVAC&R FILTERS

## FEATURES

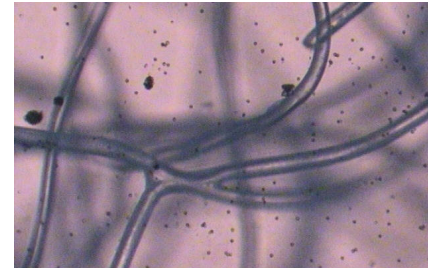
- Residual biocide coated onto filter fibers, controls & prevents mould and odour-causing bacteria from colonising
- Treatment migrates to dust particles making it toxic as a food source for micro-organisms
- Treatment is designed to stay on filter fibers even under extreme air flows
- By controlling odour-causing bacteria and mould colonization the filter airflow is maintained
- The treatment assists in the capture of finer particles reducing their harmful effect on indoor air quality

## BENEFITS

- Indoor air quality compliant
- Improves airflow by maintaining uniform pressure drop across the filter
- Increases filter efficiency
- Extends filter life
- Reduces the number of filter exchanges



Untreated (Filter Fibres)



Treated (Filter Fibres)

## PREPARATION

Product Code	Description	Dilution Rate
AGUS-FT-1G	Bioactive Filter Treatment 1 Gallon	Ready to Use

Product Code	Application Rate
AGUS-FT-1G	As per IFU <sup>1</sup>

-  **CLEANS**
-  **PROTECTS**
-  **OPTIMIZES**



AERIS ENVIRONMENTAL LTD.

5/24-36 Dunning Ave, Rosebery NSW, 2018  
info@aeris.com.au  
aeris.com.au



MIKT-057-02

Aeris Environmental Ltd  
5/26-34 DUNNING AVE NSW 2018  
NSW,  
AU

Client Account Number: A00492798GEJ  
Eurofins Quote Number: A4W7PH20001203

**Eurofins Sample Number NJ20AA7301-2**

<b>Original Received Date:</b>	04-Jun-2020
<b>Description:</b>	Bioactive Filter Treatment 5L; Expiry Date: 30-Nov-2020
<b>Lot Number:</b>	30111702
<b>Containers Submitted:</b>	1 Bottle(s)

**Testing of virucidal activity of disinfectants by surface carrier technique**

Method: TMCV 006, ASTM 1053  
Analysis Date: 25-Jun-2020

**Supplemental Information**

Samples were tested as received. Specifications (if) reported are as provided by the client.

**Contracted Company: Eurofins ams Laboratories Sydney**

8, Rachael Close, Silverwater, NSW 2128 Australia  
amslabs@eurofins.com

*TGA Licence No: MI-15112007-LI-002191-11 APVMA Licence No: 6139*

*Questions about this report should be directed to your project manager or the general email listed above.*

<b>CONDITIONS</b>	
<b>Virus Strain</b>	Murine hepatitis virus (MHV) -1 ATCC/VR-261
<b>Cell Substrate</b>	A9 cells ATCC/CCL- 1.4
<b>Test Concentration</b>	Neat
<b>Contact Time</b>	5 minutes
<b>Test Temperature</b>	Room temperature
<b>Test Condition</b>	Dirty 5% FBS (Fetal Bovine Serum)
<b>Neutraliser</b>	4 cc Sephadex Gel in PBS (Phosphate Buffer Saline)

**RESULTS:** TABLE 1: MHV-1 test/control results for 5 minutes contact

<b>Virus Dilution</b>	<b>Number of Inoculated Wells</b>	<b>Virus Control</b>	<b>Cytotoxicity</b>	<b>Neutralisation</b>	<b>Test Sample</b>
10 <sup>-1</sup>	4	4 <sup>+</sup> /4	C	C	C
10 <sup>-2</sup>	4	4 <sup>+</sup> /4	C	C	C
10 <sup>-3</sup>	4	4 <sup>+</sup> /4	0 <sup>+</sup> /4	4 <sup>+</sup> /4	1 <sup>+</sup> /4
10 <sup>-4</sup>	4	4 <sup>+</sup> /4	N/A	N/A	0 <sup>+</sup> /4
10 <sup>-5</sup>	4	4 <sup>+</sup> /4	N/A	N/A	0 <sup>+</sup> /4
10 <sup>-6</sup>	4	3 <sup>+</sup> /4	N/A	N/A	0 <sup>+</sup> /4
10 <sup>-7</sup>	4	3 <sup>+</sup> /4	N/A	N/A	N/A
10 <sup>-8</sup>	4	0 <sup>+</sup> /4	N/A	N/A	N/A
Log <sub>10</sub>	-	<b>7.17</b>	<b>2.5</b>	<b>2.5</b>	<b>2.67</b>
Log <sub>10</sub> Reduction of Virus after Treatment				<b>4.50</b>	

Note: Presence of virus in each response is recorded as “+”  
 Absence of virus in each response is recorded as “0”  
 Cytotoxic response is recorded as “C”  
 Calculated virus titre = 10<sup>7.17</sup>TCID<sub>50/0.1ml</sub> (7.17 log<sub>10</sub>)  
 Cell control - 4 wells with healthy cell monolayer

\* The Reed & Muench LD50 Method was used for determining the virus titre endpoint.

**CONCLUSIONS:**

Considering the cytotoxicity and neutralisation test results, the sample has shown virucidal efficacy against MHV-1 by achieving 4.50 log reduction in virus concentration after 5 minutes exposure period at room temperature.