



MATRIKX® Microbiological Barrier™

EXTRUDED ACTIVATED CARBON BLOCK FILTER

- 99.9999% Reduction of Bacteria*
- 99.99% Reduction of Viruses*
- 99.95% Reduction of Cysts (protozoan)*

CERTIFIED MICROBIOLOGICAL BARRIER - MICROBIOLOGICAL PURIFIER (MB)

- Certified by the State of California Department of Health Services for reduction of Bacteria, Viruses and Cysts.
- Performance Tested and Verified by BioVir Laboratories, Inc.
- Manufactured using KX's patented solid-state extrusion process, with no channeling, fluidizing or bypass.
- Compare to Microbial Reduction (MR) which offers 99.99% Reduction of Bacteria and 99.95% Reduction of Cysts.

MATERIALS AND DESIGN

Made using Genuine MATRIKX® Extruded Carbon Block technology, the filters consist of a rigid carbon block composite. Radial Flow configuration (water flows from outside to inside) supports optimized performance.

INTERNAL TEST RESULTS

Escherichia coli, *MS-2 Bacteriophage*, *PRD-1 Bacteriophage*, *Salmonella species*, *Brevundimonas diminuta*, *Raoultella terrigena* (formerly *Klebsiella terrigena*), and *Pseudomonas aeruginosa* were tested according to certified proprietary protocol. Test results for these microorganisms which may be found in drinking water sources indicate none were detected to have passed through our filters.

Microorganisms	ATCC#	Log Reduction Value*
<i>Escherichia coli</i>	11229	9.32
<i>MS-2 Bacteriophage</i>	15597-B1	5.88
<i>PRD-1 Bacteriophage</i>	1985-B1	6.76
<i>Salmonella species</i>	19585	9.46
<i>Brevundimonas diminuta</i>	13184	8.94
<i>Raoultella terrigena</i> (formerly <i>Klebsiella terrigena</i>)	33629	8.32
<i>Pseudomonas aeruginosa</i>	15692	10.60
<i>Pseudomonas aeruginosa</i>	14502	5.67

* Log Reduction Value is a ratio of the log to the base 10 of the challenge concentration divided by the filtrate concentration. It is most often used when there is a high concentration of a single challenge material, such as bacteria.

$$LRV = \text{Log}_{10} \text{Challenge/Filtrate}$$

* **IMPORTANT NOTICE:** Performance claims are based on a complete system, including a filter, housing, and connection to a pressurized water source. This filter must be placed in an appropriate system, flushed, and operated according to the system's specifications in order to deliver the claimed performance. It is essential to follow operational, maintenance, and filter replacement requirements for this filter and system to perform correctly. Read the Manufacturer's Performance Data Sheet accompanying the system and change the filter as suggested. Do not use for the treatment of water that is visually contaminated (cloudy) or has an obvious contamination source, such as contamination by raw sewage. The contaminants or other substances removed or reduced by this water filter are not necessarily in all users' water.



HOW THE TECHNOLOGY WORKS

The filter is a microporous activated extruded carbon block with a mean flow path of one micron or less, sufficient to intercept *Cryptosporidium* oocysts, viruses, and bacteria. The filter medium contains a microbiological high molecular weight polycationic interception agent, a cationic silver halide complex and a pH-altering material. The block's capacity to intercept microbiological organisms is greatly enhanced by treating the microporous activated carbon with a long-chain cationic polymer. The cationic polymers electrostatically attracts negatively charged microbes, which approach the positive surface where the microbe will irreversibly stick and be inactivated by the silver.



LIMITED LIABILITY

KX Technologies LLC makes no warranties of any kind, expressed or implied, statutory or otherwise, and expressly disclaims all warranties of every kind, concerning the product, including, without limitation, warranties of merchantability and fitness for a particular purpose, except that this product should be capable of performing as described in this product's data sheet. KX Technologies LLC's obligation shall be limited solely to the refund of the purchase price or replacement of the product proven defective, in KX Technologies LLC's sole discretion. Determination of suitability of this product for uses and applications contemplated by Buyer shall be the sole responsibility of Buyer. Use of this product constitutes Buyer's acceptance of this Limited Liability.

A Marmon Water/Berkshire Hathaway Company

This product is covered by one or more of the following United States Patent Nos. 5,019,311; 5,147,722; 5,189,092; 5,249,948; 5,331,037; 5,922,803; 5,946,342; 6,061,384; 6,395,190; 6,770,204; 6,866,704; 7,238,403; 7,241,388; 7,287,650; applicable US patent applications; foreign patents and applicable foreign patent applications.

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