PENTAIR
EVERPURE®

HOW AND WHY?
FILTRATION FOR DRINKING WATER

An integrated approach to commercial Point of Use (POU) Foodservice water management.

pentair.com

PENTAIR
EVERPURE®

TOTAL WATER MANAGEMENT

Our drinking water may be of the highest quality, but nature and the distribution network can sometimes create quality issues requiring a targeted "Point of Use" water treatment solution to provide protection for your equipment and also to maximise the quality of the food and drinks that you can proudly serve to your customers.

WATER MANAGEMENT SOLUTIONS TO OPTIMIZE DRINKING WATER QUALITY

Go for nothing less than officially certified products; tested and certified confirmed for their effective performances by independent services in accordance to the well established standards (NSF / ACS)

WHAT NEEDS TO BE MANAGED ?

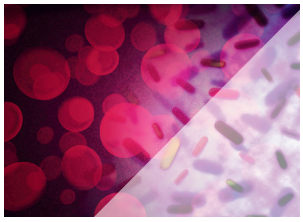
PARTICULATES: (dirt, sediment, rust) there is a lot in water that can cause added wear on the distribution network. Fine silt, dirt, rust and other debris can provide a base for scale build-up. "Brown water" from the tap, we've all experienced it, you don't want that in your drink.

TASTE & ODOUR & CHLORINE (CHLORAMINE) While the disinfectant Chlorine (chloramine) is used to make our water safe to drink, it contributes to corrosion in the equipment and gives an offensive taste and odour.

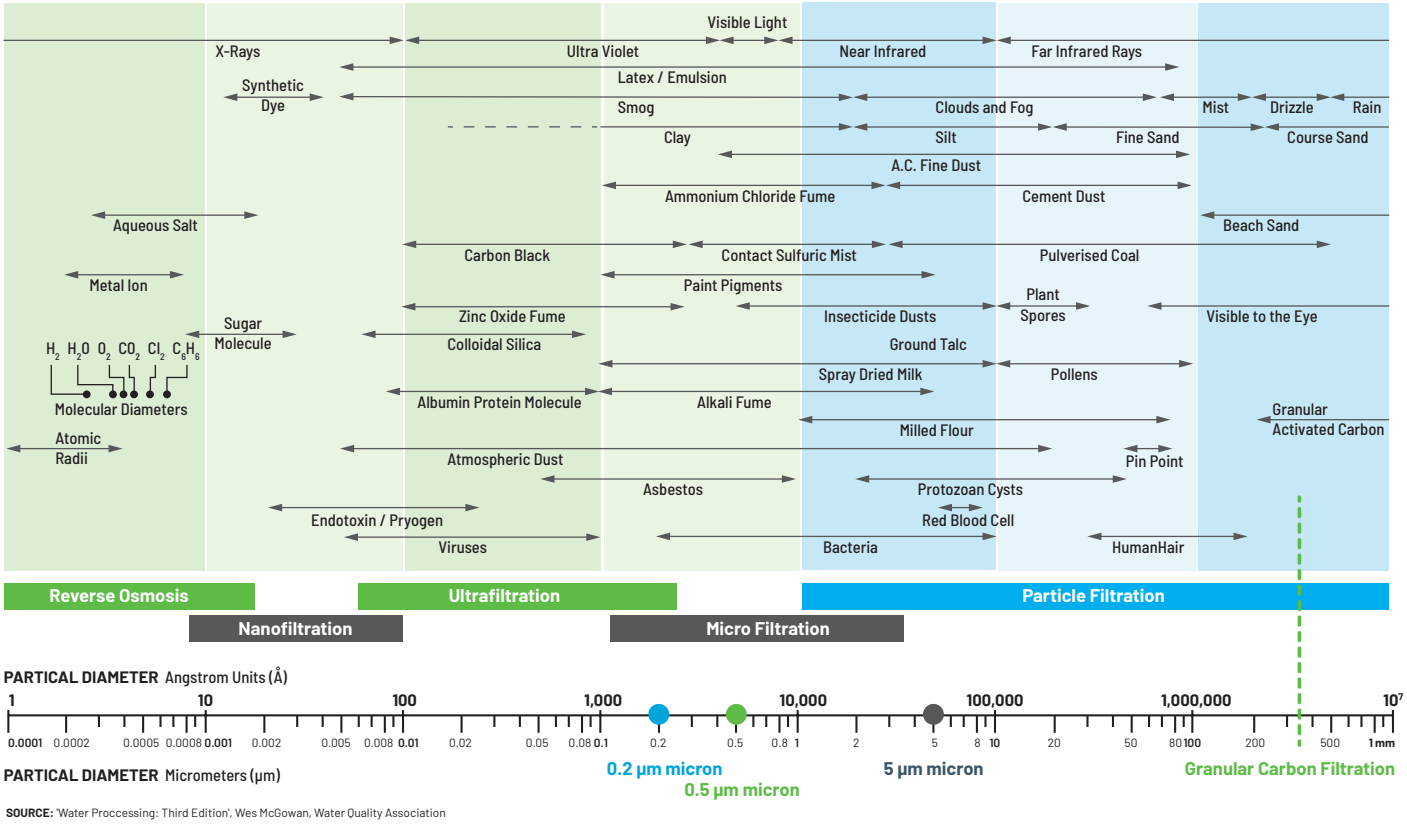
HARDNESS (scale or lime-scale). Calcium & Magnesium minerals in our tap water are influencing the taste, but if you start heating the water, they will also cause scale deposits.

MICROPLASTICS. Small plastic particles from various sources, including cosmetics, clothing and industrial processes that end up in our water. The smallest micro particles in the picture so far have an average format of +/- 1 micron (1/1000 mm)

BACTERIOLOGICAL: our healthy standard of living means that we are less immune to certain bacteria and germs. Today, mainly surface water (rivers, lakes, etc.) is used to produce our drinking water. These water sources have more exposure to such risk factors.



PARTICLE SIZE REMOVAL RANGE BY FILTRATION



SOURCE: 'Water Proccessing: Third Edition', Wes McGowan, Water Quality Association

TO WHAT EXTENT DOES THE RATING VALUE REACH?

OVERALL THE CARBON BLOCK FILTERS

"NOMINAL FILTRATION" 85%
"ABSOLUTE FILTRATION" ..... 99,+ %
LOG5 FILTRATION..... 99,999%

EVERPURE QL FILTER HEADS

EV925617 ..... QL1 Filter Head with 3/8" JG Fittings
EV925620 ..... QL1 Head with 1/4" JG (24)
4312-12 ..... QL3 Filter Head 3/8" BSP
4312-13 ..... QL3B Filter Head 3/8" BSP

EVERPURE PRECOAT FILTRATION FOLDED SEPTUM DESIGN

SUB-MICRON SOLID FILTRATION 0,5 MICRON (0,0005 mm)

Powdered Activated Carbon Coating

MicroPure II with antimicrobial Silver (AgION)

- *Large filtration Surface Area*
- *TOC Reduction*
- *99% Chlorine reduction*
- *99.6 % filtration of Asbestos*
- *99.99 % filtration of Cysts*
- *99.+ % filtration of solids > 0.5 micron*
- *99,999 % filtration of solids > 0,2 micron **

On systems with AgION technology (*)

PRECOAT FILTRATION "C" 0.5 MICRON FILTRATION

- *TOC Reduction*
- *99% Chlorine reduction*
- *99.6 % filtration of Asbestos*
- *99.99 % filtration of Cysts*
- *99.+ % filtration of solids > 0.5 micron.*

EV960112..... **AC:** 750 gallons / 2.839 L @ 1.9 L/min
EV960100 ..... **4C:** 3000 gallons / 11.355 L @ 1.9 L/min

PRECOAT FILTRATION "C" 0.2 MICRON with AgION Technology

MicroPure II with AgION technology (bacteriostatic silver)

- TOC Reduction
- 99% Chlorine reduction
- 99.6 % filtration of Asbestos
- 99.99 % filtration of Cysts
- 99,999 % filtration of solids > 0,2 micron

EV960586 ..... **AC²**:1.500 gallons / 5.678 L @ 1.9 L/min
EV960556 ..... **4C²** : 3.950 gallons / 14.952 L @ 1.9 L/min
EV961255 ..... **MC²** : 9.000 gallons / 34.068 L @ 6.3 L/min

LOG-5 BACTERIA REDUCTION (99,999 %)*

EVERPURE FC CARTRIDGES 0.2 MICRON with AgION Technology

Pentair patented technology "Fiberdyne modified Carbon Block"

Unique medium with an effective performance depth filtration

- *TOC Reduction*
- *99% Chlorine reduction*
- *99.6 % filtration of Asbestos*
- *99.99 % filtration of Cysts*
- *99,999 % filtration of solids > 0,2 micron (*)*

Minimal pressure loss Fiberdyne II Bacteriostatic filter
Maximal flow rate in a compact unit

EV969156 ..... **2FC**: 6.000 gallons / 22.712 L @ 5.6 L/min
EV969221..... **4FC**: 15.000 gallons / 56.781 L @ 9.5 L/min
EV969261 ..... **7FC**: 25.000 gallons / 94.635 L @ 9.5 L/min

LOG-5 BACTERIA REDUCTION (99,999 %)*

** testing with the small bacterium Pseudonomas diminuta was performed by Vitens laboratory, the Netherlands, an ISO 17025 accredited lab. The tests were performed under test conditions specified in the ASTM F838-05 protocol for the validation of 0.2 µm sterilizing grade filters.*

MICROGUARD PRO 2 – 4 with 0.15 MICRON HOLLOW FIBERS

Pentair patented technology "Fiberdyne modified Carbon Block"

Unique medium with an effective performance depth filtration at 5 micron

- *TOC Reduction*
- *99% Chlorine reduction*
- *99.6 % filtration of Asbestos*
- 99.99 % filtration of Cysts

Followed by "Hollow fibers" (membrane filtration) at 0.15 microns

99,999999 % bacteria filtration

EV963701 ..... **Microguard PRO2**
2.200 gallons / 8.300 L @ 1.9 L/min

EV963702..... **Microguard PR04**
3.600 gallons / 16.627 L @ 1.9 L/min

LOG-8 BACTERIA REDUCTION (99.999999%)

PRE-COAT OW200L 0.5 MICRON SCALE INHIBITOR AND LEAD FILTRATION

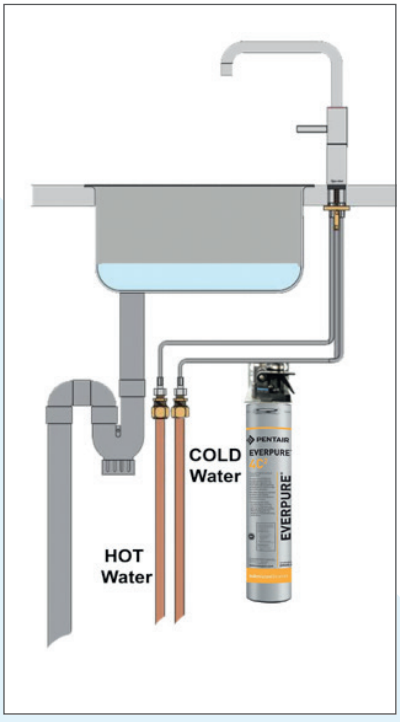
- *TOC Reduction*
- *99% Chlorine reduction*
- *99.6 % filtration of Asbestos*
- *99.99 % filtration of Cysts*
- *99.+ % filtration of solids > 0.5 micron.*

Reduces lead to below the Federal Action level of 15 ppb

EV961901 ..... **OW200L:** 480 gallons / 1.816 L @ 1.9 L/min

THE PROFESSIONAL HOME ALTERNATIVE TO A FILTER JUG

Much cheaper, more capacity and better performing.
Delicious drinking water at any time of the day.
No extra tap required in the kitchen, high Capacity.
For example with the 4C² cartridge.



Ideally treated water for consumption:

- *Drinking*
- *Cooking*
- *Washing the vegetables*
- *Brewing Coffee*

Easy to install; once a year replacing in an instant.

The capacity of the 4C²: equivalent potential as > 14.000 bottles of water (1L) 99,999% bacteriological filtration at 0.2 micron

SCALE INHIBITORS

Already with "fairly soft" water from the tap (Total hardness > 4 °dH / GPG) you might start noticing scaling & mineral deposit issues, certainly when heating the water.

Filtration systems with scale inhibitor dosing ensure a significant reduction in limescale deposits issues. Low cost high capacity" solutions based on phosphorus bonds (phosphorus, an essential mineral in the human body, also massive present in our daily food).

EVERPURE PRE-COAT FILTERS 0.2 MICRON - TYPE S² / H²

MicroPure II with AgION technology (bacteriostatic silver)

- *TOC Reduction*
- *99% Chlorine reduction*
- *99.6 % filtration of Asbestos*
- *99.99 % filtration of Cysts*
- *99,999 % filtration of solids > 0,2 micron (*)*

The scale inhibitor dosing system will manage a significant reduction in mineral deposit & calcification issues.

EV961807 ..... **OCS²**: 1.500 gallons / 5.678 L@ 1.9 L/min
EV961251..... **BH²**: 3.000 gallons / 11.356 L @ 1.9 L/min
EV961326 ..... **MH²**:9.000 gallons / 34.068 L @ 6.3 L/min

LOG-5 BACTERIA REDUCTION (99,999 %)(*)

EVERPURE FC-S CARTRIDGES 0.2 MICRON with AgION Technology

Pentair patented technology "Fiberdyne modified Carbon Block"

Unique medium with an effective performance depth filtration

- *TOC Reduction*
- *99% Chlorine reduction*
- *99.6 % filtration of Asbestos*
- *99.99 % filtration of Cysts*
- *99,999 % filtration of solids > 0,2 micron (*)*

The scale inhibitor dosing system will manage a significant reduction in mineral deposit & calcification issues

Minimal pressure loss Fiberdyne II Bacteriostatic filter

Maximal flow rate in a compact unit

EV969176..... **2FC-S**:6.000 gallons /22.712 L @ 5.6 L/min
EV969231 ..... **4FC-S**:15.000 gallons /56.781 L @ 9.5 L/min
EV969271 ..... **7FC-S**:25.000 gallons /94.635 L@ 9.5 L/min

LOG-5 BACTERIA REDUCTION (99,999 %)(*)

**testing with the small bacterium Pseudonomas diminuta was performed by Vitens laboratory, the Netherlands, an ISO 17025 accredited lab. The tests were performed under test conditions specified in the ASTM F838-05 protocol for the validation of 0.2 µm sterilizing grade filters.*

ECOLOGICAL - ECONOMICAL

Everpure filters housing (about 80 % of the weight) is made of Aluminium which is 100% recyclable also has value for metal recycling activities.

Active Carbon is a natural product.

Leaving only the absolute minimal "man-made materials" that can be incinerated.

NSF/ANSI 42, 53 AND 401 FILTRATION SYSTEMS STANDARDS

When entering the competitive filtration marketplace, it's important **to consider if your product has the right certifications to stand out. The most common certifications for filtration systems are NSF/ANSI 42, 53 and 401, which certify that a product reduces a particular set of contaminants from drinking water.**

NSF/ANSI 42: DRINKING WATER TREATMENT UNITS
AESTHETIC EFFECTS

This standard establishes minimum requirements for systems designed to reduce non-health-related contaminants.

SCOPE: Point-of-use and point-of-entry systems

CLAIMS: Chlorine, taste and odour, chloramine, particulate, iron, manganese, zinc and total dissolved solids (TDS)

TESTING: Material safety, structural integrity and specific aesthetic-related contaminant reduction claims (claims vary by product)

NSF/ANSI 53: DRINKING WATER TREATMENT UNITS
HEALTH EFFECTS

This standard establishes minimum requirements for systems designed to reduce specific health-related contaminants.

SCOPE: Point-of-use and point-of-entry systems

CLAIMS: This standard offers over 50 contaminant reduction claims. Some of the most popular include: lead, Cryptosporidium, VOCs and chromium.

TESTING: Material safety, structural integrity and specific health-related contaminant reduction claims (claims vary by product)

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LOG-5 BACTERIA REDUCTION

Exciting News Regarding Bacteria Reduction in Everpure Filters Featuring Precoat Technology with MicroPure™-II Media:

- Cold Drink Applications: AC², 4C², MC² & XC²
- Hot Drink Applications: OCS², BH² & MH²
- Ice Applications: i2000² & i4000²

New !! – Bacteria Reduction

Many of Pentair water filters featuring MicroPure™-II media are labelled to 0.5 micron, because this is the limit that NSF test to when awarding certification for Standard-42 (Class-I particulate reduction).

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PENTAIR

LOG-5 BACTERIA REDUCTION

Exciting News Regarding Bacteria Reduction in Everpure Filters Featuring Modified-Block Technology with Fibredyne™-II Media:

- Cold Drink Applications: 2FC, 4FC, 7FC & SEN
- Ice, Steam & Hot Applications: 2FC-S, 4FC-S, 7FC-S

New !! – Bacteria Reduction

Many of Pentair water filters featuring Fibredyne™II media are labelled to 0.5 micron, because this is the limit that NSF tested to when awarding certification for Standard-42 (Class-I particulate reduction). However, in order to provide additional confirmation and information about our product's capabilities, Pentair enlisted an accredited third-party laboratory to confirm that these same filters may actually achieve even better reduction in sub-micron particles including bacteria. This testing is now completed, and Pentair is pleased to inform you that the water filters listed above have been confirmed to a log-5 reduction* (99.999% reduction) in 0.2µm bacteria. Pentair will update its product labelling for these products over the next few months. This applies to all of the filters listed above since their launch to the market.

NSF/ANSI Standards – including Bacteriostatic Effect

NSF remains the cornerstone of all performance testing, and the water filters listed above already meet the demanding standards set out by NSF/ANSI-42 (Aesthetic Effects) and NSF/ANSI-53 (Health Effects).

While details of these certifications can be found on NSF website listings and on our product literature, we wish to draw your attention to one particular aspect of NSF/ANSI-42, which is a ***Bacteriostatic Effect*** claim. The significance of this should not be underestimated; Pentair-Everpure's NSF-42 BE certification is only made possible because of the design features in our modified-block filters and the use of our proprietary Fibredyne™-II media. Our NSF-42/ANSI BE certification means that – unlike many water filters on the market – the Pentair systems with this certification limit the passage or growth of bacteria that may already exist in the incoming water.

Graham Tennant – Product Development EMEA
07 October 2015

*testing with the small bacterium *Pseudonomas diminuta* was performed by Vitens laboratory, the Netherlands, an ISO 17025 accredited lab. The tests were performed under test conditions specified in the ASTM F838-05 protocol for the validation of 0.2 µm sterilizing grade filters.

Disclaimer: The information and data on this sheet is for general purposes only. Since the conditions under which our products may be used are beyond our control, we cannot accept any liability with respect to the improper installation, application and/or use of our products.

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DECLARATION OF COMPLIANCE – EU FOOD CONTACT

Pentair-Everpure Filter Cartridges:

Everpure-Claris & Everpure-Claris Ultra Cartridges – all sizes

AC, 4C, 2DC, 4DC, AC², 4C², OCS², BH², MH², i500², i2000², MC², EC110, ED210, ScaleSticks

Pentair-Everpure Filter Heads, Manifolds, E10 & E20 Pre-filter & SRX Post-Filter Systems

Everpure-Claris Gen-1 & Gen-2 Heads

Everpure QC7i, QL1, QL2, QL2B, QL3, QL3B QL3BB – All Single-Head Variants

Everpure QC7i OPMs, Coldrink/Insurice and High-Flow CSR Manifolds – All Single, Twin, Triple & Quad Variants

Everpure E10 & E20 Pre-Filter & SRX Post-Filter systems with Clear or Black Sumps

European Food Contact Legislation

The chemical composition of all wetted materials used in construction of above products has been disclosed, evaluated and tested by a 3rd party laboratory. All chemical substances subject to restrictions have been tested and comply with current European legislation on materials in contact with foodstuffs.

- Plastic parts are manufactured according to Regulation 10/2011/EC and its amendments. All substances used to formulate the plastic parts are listed in Annex I. All plastic parts used do not contain any dual-use additives. Overall migration tests have been conducted on head/cartridge combinations and found to be within the limit of 10 mg/dm².
- Rubber parts are manufactured according to FDA 21 CFR §177.2600
- For wetted parts not covered by the above legislation the full chemical compositions have been fully disclosed to a 3rd party institute for evaluation and testing. All substances subject to restrictions have been proved to be in compliance with current legislation.
- Bisphenol-A is not present in any raw material formulations used in above Pentair-Everpure products
- Substances restricted by specific migration limits have been identified and tested for migration. All are in compliance with the current legislation.
- Ion exchange resins meet AP (2004) 3; and activated carbon meets EN 12915.

REACH (Registration, Evaluation, Authorisation & Restriction of Chemicals)

Substances of Very High Concern in Annex XIV of Regulation 1907/2006/EC are not present in the products.

Good Manufacturing Practise

The products are manufactured according to Regulation 2023/2006/EC on good manufacturing practice.

Specifications for Use

The products are approved for use with cold water. Overall migration tests were carried out in accordance with EN 1186 part 9 (72 hours at 20°C). Contact time between the water and the products tested was 72 hours. Microbiological tests were performed in agreement with Danish EPA Project no. 1105 from 2006. The results show no build-up of bacteria over time and no selection between strains.

Conclusion

The above products do not apply any danger to health or to the environment according to Regulation 1935/2004/EC.

Graham Tennant – Product Development EMEA

02 October 2018

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EVERPURE. WORLD CLASS SOLUTIONS FOR TOTAL WATER MANAGEMENT

DRINKING WATER AND FOUNTAIN BEVERAGE

Today consumers are more concerned than ever about the quality of water. We improve drinking water by:

- Reducing chlorine, chloramines and other chemicals that can affect the taste and odour of water
- Reducing harmful cysts and other contaminants
- Improve carbonation
- Reducing particulates that cause cloudy water
- Help give your beverages "right out of the bottle" taste and appeal.

COFFEE AND ESPRESSO

Good coffee can be a real draw for customers. But if the water's taste and odour isn't right... it won't matter what premium coffee bean you use. If you have scaling or corrosion issues your brewing equipment Coffee & Espresso will require more maintenance, or over time may fail altogether. The best water means the best coffee, and more efficient brewing equipment. Everpure water treatment systems provide 'Total Water Management'.

STEAM

It's crucial for steam equipment to have clean water. Chlorine and minerals can cause serious problems, including abrasion, clogging and corrosion. All of these can cause higher energy and maintenance costs, and equipment breakdown. Everpure's water management systems reduce the need for regular de-liming, provide improved efficiency and may help extend the life of your steam equipment.

SOFTENING

Everpure's Water Softening products are the first line of defence against scaling (calcium and magnesium build-up). Whether at Point of Use or Point of Entry, they are designed and built for durability to provide you with many years of trouble-free operation.

GLOBAL AUTHORISED DEALER NETWORK

Pentair Everpure are innovative problem-solvers who believe water is the key for life. We deliver a comprehensive range of smart, sustainable water solutions to homes, business and industry around the world. All of these critical water environments are managed and maintained by our experienced service partners.

Experienced turnkey project management

Independent local installation and service network

Global distribution

Comprehensive aftersales customer support

REVERSE OSMOSIS

Our Reverse Osmosis systems are specially engineered for rigorous foodservice applications. They're designed for situations with especially severe water conditions such as high Total Dissolved Solids (TDS).

- Reduce high TDS levels that can impart an objectionable taste
- Inhibit limescale build-up that can ruin your equipment
- Reduce contaminants such as arsenic, lead, copper and nitrate/nitrite
- Reduce Chlorine and other off-tastes, and odours
- Reduce health threatening cysts such as cryptosporidium.

SPECIALITY: WAREWASHING

Scaling is not just damaging to warewashing equipment, it also wastes energy and produces unsightly spotting on glasses, dishes and utensils. Our systems inhibit or eliminate limescale build-up, reduce corrosion and allow for easy deliming. The result is equipment that runs more smoothly.

ICE

Good quality ice has a sparkle to it. When you serve a glass of ice water, you want it to look clean and crystal clear. Everpure products remove particulates that can cause cloudy ice, and improve both taste and odour. In addition, our products control the build-up of scale in the machine. Fine filtered water keeps your ice-making machine operating at peak efficiency.

PENTAIR

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