## **PIGNEER** Protecting Water for Future Generations

PI**ONE**ER is the First of its Kind Whole-House Lead, Cyst & PFOA/PFOS Removal System

# CHEMICALS

The chemicals Perfluorooctanoic acid (PFOA), also known as C8, and Perfluorooctane sulfonic acid (PFOS) are bio-permanent, are resistant to direct oxidation, and do not break down naturally in the environment or the human body. Studies suggest that exposure to the chemicals may lead to cancer.

#### HOW DOES THE PIONEER SYSTEM PROTECT ME

PIONEER<sup>™</sup> successfully removes these chemicals and is installed where the water line enters your home, business or restaurant. This system has been tested and third-party certified as required in the NSF/ANSI P473 standard for PFOA/PFOS, along with NSF/ANSI 53 standard for the reduction of lead and cyst.



Toxic Chemicals in the United States ••

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PFOA

# THE HISTORY OF THE CHEMICALS **1940's - 2015**

Common usage of a class of man-made fully fluorinated chemical compounds known to be resistant to heat, water, and oils, incorporated into a variety of industrial and commercial products, such as non-stick cookware (a chemical ingredient in the production of the nonstick coating used to make Teflon®), carpets, stain resistant clothing, food packaging, firefighting foams, adhesives, cosmetics, leather, and the film inside microwave popcorn bags.

# **REGULATIONS**

The EPA currently marks the unsafe level of PFOA/ PFOS to be above 70 parts per trillion, although some researchers and states believe lower levels are still unsafe. Even 1 ppt may be enough to pose health risks, leading regulators to recommend these chemicals as candidates for the Safe Drinking Water Act.

#### TESTING PIONEER **PFOA/PFOS**

The NSF P473 Drinking Water Treatment Units standard is an extremely rigorous test to evaluate the effectiveness of water treatment equipment for the reduction of chemicals in drinking water, specifically perfluorooctanoic acid (PFAO) and perfluorooactane sulfonate (PFOS). The P473 standard contains four primary sections and is similar to NSF/ANSI 53 Standard for Lead; Section 3 evaluates the Performance of the filter to reduce the PFOA and PFOS. **The US EPA's combined health advisory level for PFOA & PFOS is 70 parts per trillion (70 ppt) in drinking water**. The influent level for P473 testing is 1.5 parts per billion (ppb), added as 1.0 ppb PFOS and 0.5 ppb PFOA, or 20 times the health advisory level set by the EPA. (1.5 parts per billion is equal to 1500 parts per trillion.) For the life of the filter, it must reduce the influent PFOA/PFOS concentration below 70 ppt to comply with the requirements of the standard. **ENPRESS results are below 10 ppt.** 

### THE CHEMICALS IN OUR BACK YARD

The drinking water supplies of more than **15 million Americans** have water concentrations of these compounds at **levels exceeding the health advisory limit**, however this only represents testing in half of the water supplies in the US. Other estimates indicate the chemicals have contaminated more than **1500 water systems nationally**, affecting up to **110 million Americans**. Based on testing by the Centers for Disease Control and Prevention, about **98 percent of Americans have at least some level of chemicals in their blood**, and has been found in water supplies across more than 27 states.

#### WHAT DOES THIS MEAN? THE SOLUTION

It's obvious that PFOA/PFOS chemicals need to be removed from your water. The **PIONEER**<sup>™</sup> POE filtration system houses a strategically designed nominal 0.5-micron filter to remove BOTH chemicals along with BOTH forms of lead (soluble and particulate) from your house in a single filter. The **PIONEER**<sup>™</sup> is the First of its Kind Whole-House Lead, Cyst & PFOA/PFOS Removal System, providing safe drinking water throughout your entire home.



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