

# **Purification Capability**

Purifics offers advanced, fully integrated technologies for complete water purification, backed by over 30 years of proven performance in both municipal and industrial applications. These unique technologies combine the best of Continuous Ultra-Filtration (*Cuf*) and Chemical Free AOP+ (*Photo-Cat*) with Complete Process Automation. Purifics systems purify water by removing: Chemicals, Metals, Turbidity, Bacteria, Viruses, Oil, Particulate, TOC, BOD, COD, DOC, Color, Taste, Odor, Hardness, EDCs, PPCPs, TSS, TTHM & HAA Precursors, PFOS/PFOA, H<sub>2</sub>S, green algae & Silica. See reverse for details.



### **Purification Technologies:**

**Cuf** is a high-performance system that uses SiC ceramic membranes and concentrated sweep floc coagulation to remove multiple contaminants in a single compact platform. The system achieves Zero Liquid Discharge (ZLD) through its integrated Solids Recovery Unit (**SRU**), all without additional chemicals or labor. This eliminates the need for pre-treatment and membrane replacement while significantly reducing footprint, process complexity, and chemical consumption.

**Photo-Cat** is a chemical-free, photocatalytic Advanced Oxidation Process (AOP+) that delivers the highest oxidation potential in the industry. It effectively destroys chemical contaminants that conventional AOPs cannot, including persistent and emerging pollutants like 1-4 Dioxane and PFAS with no chemical additions. **Photo-Cat** offers a sustainable, low-operating-cost solution for the complete destruction of even the most difficult-to-treat compounds.

Purifics products are protected by US & Foreign Patents and patents pending. Purifics, Photo-Cat, ......f and AOP+ are registered trademarks.



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#### **Contaminants Removed and/or Destroyed:**

**Metals:** Ag, Al, As, Au, Ba, Be, Cd, Co, Cr<sup>6</sup>, Cu, Fe, Hg, Mn, Ni, P, Pb, Pt, Se, Sn, Tc<sup>99</sup>, Th, U, V, Zn

**Pathogens:** Cryptosporidium, E-coli, Giardia, Bacteriophage, Spores, Cyanobacteria, etc. >5 Log removal

(Remove, or kill, or consume)

**Viruses:** Adenoviruses, MS2, etc. >7 Log removal

(Remove, or kill, or consume)

**Oil/NAPL:** Heavy, Light, Oil/Sand, LNAPL, DNAPL, mechanical & chemical emulsions, diesel, gasoline

Recovered as Neat product

**Particulate:** Absolute particulate removal by filtration, agglomeration, oxidation, reduction, etc.

**NORMs:** Radium 226, Radium 228, Gross Alpha, Gross Beta

**TDS:** Hardness (Ca & Mg)

**Chemicals:** Alcohols Amines Chemical Warfare Agents Nitro-Organics

Aldehydes Aromatics Dioxins/Furans PAHs

Alkanes BTEX Energetics PFOs & PFOA
Alkenes Carboxylic Acids Ethers Peroxides

Alkynes Chlorinated Alkanes Explosives Phenols

Aliphatics Chlorinated Aliphatics Herbicides/Pesticides

Amides Chlorinated Aromatics Ketones

TTHM & HAA Precursors

API – Active Pharmaceutical

Amides Chlorinated Aromatics Ketones Ingredients

#### **Specific Contaminants of Concern**

Purifics processes do not generate H<sub>2</sub>O<sub>2</sub> residual, Bromate, NDMA and will destroy these contaminants if present.

#### **Fluids Purification**

In addition to water, Purifics technologies are capable of purifying fluids such as NAPLs & fuels, and aggressive chemicals such as solvents, acids and bases.

## **Solution Specification**

Purifics complete water purification systems operate at various ranges and are able to achieve advanced purification levels suited to the client's specific requirements and regulations. Purifics technology has been accredited with a variety of awards and certifications.

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