



FLUID TREATMENT, INC.



Solutions for economical clean water™

What are KDF® Process Media and how do they work?

KDF® Process Media are high-purity, granulated copper and zinc-based alloys that treat water through a process based upon the principle of **redox** (Oxidation-Reduction). Originally, KDF was shorthand for Kinetic Degradation Fluxion.



We can explain redox like this: KDF Fluid Treatment's unique combination of copper and zinc creates an electro-chemical reaction. During this reaction, electrons are transferred between molecules, and new elements are created. Some harmful contaminants are changed into harmless components. Free chlorine, for instance, is changed into benign, water-soluble chloride, which is then carried harmlessly through the water supply. Similarly, some heavy metals such as copper, lead, mercury and others, react to plate out onto the medium's surface, thus being effectively removed from the water supply.

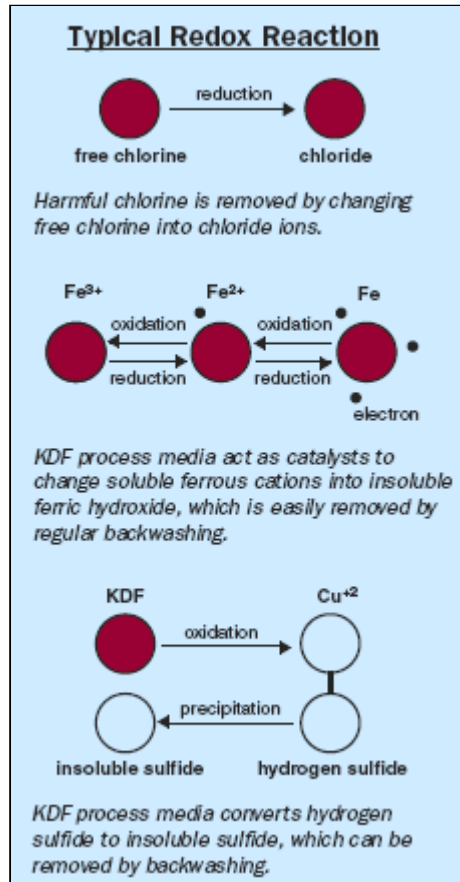
Why use KDF Process Media?

The marketplace is filled with good water filtration/purification systems and technologies (We should know—many of those manufacturers are some of our best customers.)

So...why consider using KDF Process Media? We can give you two good reasons (See "[Benefits of KDF Process Media](#)" below). One: Because KDF Process Media enhance the performance, extend the life, reduce the maintenance and lower the total cost of many available carbon-based systems. Two: KDF Process Media help control microorganisms by creating an environment that's deadly to some microorganisms and that interferes with the ability of many other microorganisms to function. Either way, the use of KDF Process Media results in the total elimination of some contaminants and a great reduction of a wide variety of others.

Benefits of KDF Process Media

- Significantly extend the life of granular activated carbon
- Are recyclable
- Effectively remove chlorine and heavy metals and control microorganisms
- Are available in four granular styles, each



- designed for a specific need
- Outperform silver-impregnated carbons
- Require no EPA registration, thus less red tape

Where are KDF Process Media used?

KDF Process Media are used in a variety of pretreatment, primary treatment, and wastewater applications. They are generally used in place of, or in conjunction with, granular activated carbon filters, even carbon block or inline filters. KDF Process Media extend the life of granular activated carbon (GAC) while protecting the carbon bed against fouling by bacterial growth.

Our Media are also used to replace silver-impregnated systems. Silver is toxic, KDF Process Media are not. Silver must be registered with the EPA as a toxic pesticide, KDF Process Media do not. By the way, silver is more expensive than KDF Process Media.

KDF Process Media vs. Activated Carbon

	KDF Media	Activated Carbon
Life	More than 6 years*	Only 6 to 12 months
Bacteria and Algae	Controls Both	Permits Growth
Disposal	Recyclable	Hazardous Waste
Mechanism	Oxidation/Reduction	Adsorption
Lb/cu ft	171	35
Contaminants Eliminated	Inorganic	Organic
Cost/lb	\$4.00	\$1.20

* With proper handling

What about KDF Process Media and RO, DI and IX systems?

Reverse Osmosis (RO), Deionization (DI) and Ion Exchange (IX) systems benefit from the use of KDF Process Media because our Media allow these systems to tend to their strengths. Our Media protect RO systems from chlorine degradation and bacterial contamination, extending the life of the systems' membranes. KDF Process Media protect expensive IX systems from becoming fouled with chlorine, algae, fungi and bacteria. Less fouling, longer life and reduced maintenance, all combine for lower costs.

KDF Process Media vs. Silver-Impregnated Carbon

	KDF Media	Silver-Impregnated Carbon †
Life	More than 6 years*	Only 6 to 12 months
Bacteria and Algae	Controls Both	Permits Growth
Disposal	Recyclable	Hazardous Waste
Mechanism	Oxidation/Reduction	Adsorption
Heavy Metals	Yes	No
pH	6.5 to 8.5	Sensitive
Use	POU/POE, Industrial, Commercial	Home Water Filter Products
US EPA Registration	Not Required	Required
Cost/lb	\$4.00	\$8.00

† Note: Gulf South Research Institute found silver-impregnated carbon provides the same performance as activated carbon, except in low pH water.

* With proper handling