



EXPLANATION KDF FILTER

Kinetic Degradation Fluxion (KDF) is a high-purity copper-zinc formulation that uses a basic chemical process known as redox (oxidation/reduction) to remove chlorine, lead, mercury, iron, and hydrogen sulfide from water supplies. The process also has a mild anti-bacterial, algacetic, and fungistatic, effect and may reduce the accumulation of lime scale.

KDF process media is used in pre-treatment and primary treatment applications to supplement or replace existing technologies in order to extend system life and to reduce heavy metal contamination, chlorine and hydrogen sulfide.

What Contaminants Does KDF Remove?

KDF process media will reduce or remove chlorine, iron, hydrogen sulfide, lead, mercury, magnesium, and chromium, and may inhibit the growth of bacteria, algae, and fungi.

Redox media remove up to 98% of water-soluble cations (positively-charged ions) of lead, mercury, copper, nickel, chromium, and other dissolved metals. While removal rates depend on a number of factors, more than 98% of chlorine is removed by KDF in home water treatment systems (90% in shower water filters due to high flow rate).

How are chlorine, Iron, hydrogen sulfide and heavy metals removed?

*Iron removal KDF process media

Remove iron from water, either alone or in combination with other treatment technologies used at the point-of-entry. KDF process media act as catalysts to change soluble ferrous cations into insoluble ferric hydroxide, which is easily removed by regular backwashing. KDF 85 medium removes more than 90% of iron from Groundwater supplies.

* Hydrogen sulfide removal

Medium eliminates H₂S by converting the hydrogen sulfide gas to insoluble sulfide, an inert, harmless precipitant. When hydrogen sulfide contaminated water enters the KDF filter, the copper in the KDF media loses an electron and the sulfur and water are formed. The copper sulfide is insoluble in water and can be backwashed off the KDF filter media. Periodic backwashing eliminates accumulations of the precipitant from the media bed.

* Heavy metals removal

KDF 55, KDF 8s and KDF-C media can remove up to 98% of water-soluble cations (positively-charged ions) of lead, mercury, copper, nickel, chromium, and other dissolved metals. When filtered through KDF media, soluble lead cations are reduced to insoluble lead atoms, which are electroplated onto the surface of the media. Other heavy metals bond to the media and may be recovered when the exhausted media pass through a copper smelter.

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