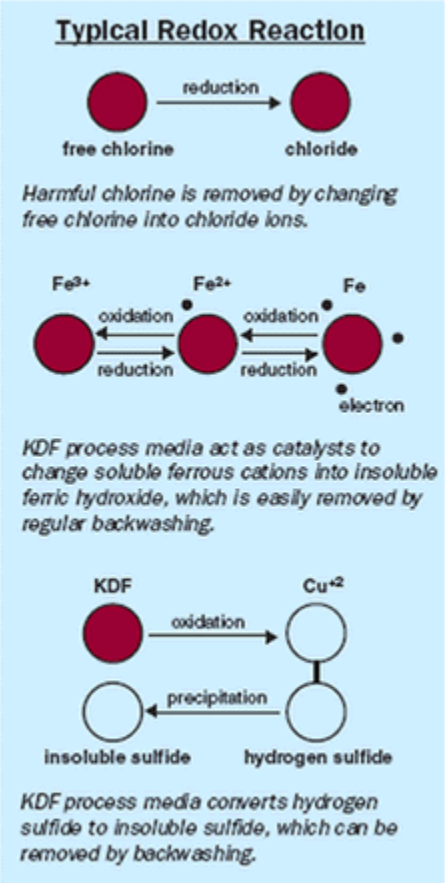
Oxidation/Reduction Process



Eagle Redox Alloy® media is a major advancement in water treatment technology that works on basic process known as REDOX (oxidation/reduction) principles, representing a new and unique way of water processing medium which by its natural process of electrochemical oxidation/reduction and adsorption action reduces and/or removes many unwanted contaminants from water.

Eagle Redox Alloy® media is a versatile, specially formulated high purity, bimetal material. This product operates as a multifunctional medium which has superior capabilities of de-chlorination of drinking water and reduces dissolved heavy metals in water supplies.

The media inhibits bacteria growth (fungi, algae and mold) and reduces lime scale, mold, and fungi. throughout the entire unit. In fact, testing has shown that it reduces it up to 90%; thus eliminating the need for silver, commonly used in carbon-only filters. Silver is considered a pesticide by the EPA and, as such, must be registered with EPA.

Eagle Redox Alloy® media consists of a high purity copper-zinc formulation. These substances exchange electrons or bond with chlorine and other metals contained in the water to create harmless substances.

Eagle Redox Alloy® media is completely safe and meets EPA and FDA standards for levels of zinc and copper in potable water, so the process is not toxic and does not cause any adverse side effects.

- **What is Eagle Redox Alloy® media?**
  It is a high-purity copper-zinc formulation that uses a basic process known as redox (oxidation/reduction) to remove chlorine, lead, mercury, iron, and hydrogen sulfide from water supplies.
- **How does Eagle Redox Alloy® media work?**
  In short, the **Eagle Redox Alloy® media** works by exchanging electrons with contaminants. This "give and take" of electrons converts many contaminants into harmless components. During this reaction, electrons are transferred between molecules, and new elements are created. Some harmful contaminants are changed into harmless components. Others are electrochemically bound to the Eagle Redox Alloy media.
- **What contaminants Does Eagle Redox Alloy® media remove?**
  Eagle Redox Alloy media works to reduce or remove chlorine, iron, hydrogen sulfide, lead, mercury, calcium carbonate, magnesium, chromium, bacteria, algae, and fungi. Redox media removes up to 98% of water-soluble cations (positively-charged ions) of lead, mercury, copper, nickel, chromium, and other dissolved metals. In most cases, more than 98% of chlorine is removed if operated within recommended flow rates Eagle Redox Alloy media alloys function as catalysts to change soluble ferrous cations (positively-charged ions) into insoluble ferric hydroxide, which can be removed with regular backwashing. With enough oxygen dissolved in the water, iron removal rates of 98 percent or better are common.
- **How does Redox Eagle Redox Alloy® media Remove Chlorine from the water?**
  High-purity copper-zinc redox media consistently remove 99% of free chlorine by electrochemically reducing dissolved chlorine gas to water-soluble chloride ions.

- **How does Eagle Redox Alloy® media remove Hydrogen Sulfide from the water?**
  When hydrogen sulfide contaminated water enters the Redox (Oxidation/reduction process) media filter, the copper in the Eagle Redox Alloy media loses an electron and the sulfur gains an electron and copper sulfide and water are formed. The copper sulfide is insoluble in water and can be backwashed off the Eagle Redox Alloy filter media.
- **Will the Eagle Redox Alloy® media remove heavy metals such as lead from the water?**
  Eagle Redox Alloy media remove up to 98% of water-soluble cations (positively-charged ions) of lead, mercury, copper, nickel, chromium, and other dissolved metals. When filtered through Redox Eagle Redox Alloy® 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.
- **Will the Eagle Redox Alloy® media control microorganism growth in the water filters?**
  Eagle Redox Alloy media are incorporated into carbon blocks and other matrices for bacteria control and scale reduction. The oxidation/reduction potential (ORP) shift by a factor of -300mV or more for water filtered through redox media controls microorganism growth. Treating water reduces bacteria and other microorganisms by disrupting electron transport, causing cellular damage. Eagle Redox Alloy media also kill bacteria by direct electrochemical contact and by the flash formation of hydroxyl radicals and hydrogen peroxide, both of which interfere with a microorganism's ability to function.
- **Will the Eagle Redox Alloy® media filter systems add any toxic substances to the water?**
  Eagle Redox Alloy media are completely safe. Eagle Redox Alloy media meet EPA and Food and Drug Administration standards for levels of zinc and copper in potable water, so the process is not toxic and does not cause any adverse side effects. You may not even realize that Eagle Redox Alloy media are working for you. Eagle Redox Alloy® media is the core product of many filtration systems, and can be used in conjunction with other products to provide superior purification.