A naturally mined ore, Pyrolox™ is a mineral form of manganese dioxide which has been used in water treatment for more than 75 years. Pyrolox™ is a granular filtration media for hydrogen sulfide, iron and manganese reduction. Pyrolox™ functions as a catalyst, but itself remains relatively unchanged. Pyrolox™ works on a principle whereby the hydrogen sulfide, iron and manganese are oxidized and trapped on the media while simple back washing cleans the bed. No chemical regeneration is required, nothing is imparted into the drinking water and Pyrolox™ has a high capacity for low contaminant concentrations. Pyrolox™ can be used in conjunction with aeration, chlorination, ozone or other pretreatment methods for difficult applications. Chlorine or other oxidants accelerate the catalytic reaction. Because of its heavy weight, it is very important that Pyrolox™ filters are back washed properly to insure adequate bed expansion and continued service life.

**Advantages:**
- Effective reduction of iron, sulfur and manganese
- Durable material with long service life and low annual attrition of bed
- No chemical regeneration required only periodic back washing

**Physical Properties:**
- Color ................................................................. Black
- Bulk Density ......................................................... 120 lbs./cu. ft.
- Mesh Size .............................................................. 8 x 20
- Effective Size ....................................................... 0.51 mm
- Uniform Coefficient ............................................ 1.7
- Specific Gravity .................................................... 3.8

**Conditions for Operation:**
- pH ........................................................................ 6.5 – 9.0
- Bed depth ............................................................ application dependent
- Backwash flow rate ........................................... 25 – 30 gpm per sq. ft.
- Backwash expansion ........................................ 15 – 30% of bed depth
- Service flow rate ................................................ 5 gpm/sq. ft.
- Freeboard ............................................................... 40% of bed depth (min.)

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**Backwashing** - As with any media, frequent and thorough back-washing is essential for long-term success with Pyrolox™. The specific frequency of regular back-washing is dependent on water quality and application rate. A daily backwash at the appropriate rate is required to remove precipitated contaminants from the filter bed.

**Oxidant Feed** - To maintain and further augment the longterm performance and removal capacity of the media, an oxidant feed of some type is strongly recommended. This will maintain the media and enhance removal capacity. Chlorine injection (options include chlorine, sodium hypochlorite, or calcium hypochlorite) immediately up stream of the filter feed is a simple way to meet this requirement. Other acceptable oxidants include air injection (oxygen is an oxidant), potassium permanganate, sodium permanganate, etc. Hydrogen peroxide is specifically prohibited for use as an oxidant.
The use of additional oxidizing agents (oxygen, chlorine, ozone, hydrogen peroxide, potassium permanganate, etc.) is recommended. Oxidizers will not adversely affect Filox™. As a matter of fact, they will enhance its performance. They super-oxidize the media, which enables Filox™ to perform quicker and keep cleaner. It is always a safe practice to install an oxidation method upstream (in front) of the Filox™ bed.