Iron, Manganese and Hydrogen Sulfide Removal Media

AD26 media is a high-flowrate, granular filter media used for removing hydrogen sulfide, iron and manganese compounds from water supplies. AD26 operates both as a classical filter working with an oxidant and as a catalytic media due to its ability to accelerate the reaction between the oxidizing agent and any prevalent dissolved oxygen with the sulfide, iron and manganese present. Dissolved iron, manganese and hydrogen sulfide will stay in solution unless the equilibrium is changed. AD26 is a dense media that stops oxidized (precipitated) forms of iron, manganese and hydrogen sulfide from passing through the bed. Most of the manganous manganese (Mn++) is rapidly removed in the first few inches of media where it is further oxidized to manganite, MnO(OH). Iron and manganese that is not oxidized become catalytically precipitated and then adsorbed directly on the media.

The adsorbed manganese, iron and precipitated sulfur are expelled during backwash. Any insoluble ferric hydroxide particulate formation is also expelled during backwash. The media must be properly backwashed to break loose and remove the filtered contaminants of precipitated iron, manganese and sulfur. System sizing of the control valve and tank are necessary to sustain media performance.

A continuous reaction occurs with the addition of an oxidant, regenerating the media surface and replenishing the AD26. For difficult applications, AD26 filters can be enhanced with aeration, chlorination or ozone. Because of AD26's naturally high manganese dioxide content, it provides a higher adsorption capacity than other media. AD26 is a sound alternative to greensand, Birm, Filox-R and chlorination for manganese, iron and hydrogen sulfide removal. An AD26 filter is recommended before your softner to protect the ion exchange resin from fouling.

ADVANTAGES

✓ Efficient reduction of iron, sulfur and manganese	✓ NSF/ANSI Standard 61 Certified
✓ Long Service Life	✓ Only regular backwashing required
✓ High flow rates, Low pressure drop	✓ Continuous regeneration
✓ 10 – 30 second reaction time	✓ Converts ferrous iron to ferric iron
✓ Converts H2S to sulfur	✓ Converts manganese to MnO(OH)

APPLICATIONS

✓ Removal of iron up to 10 ppm	✓ Removal of manganese up to 5 ppm
✓ Removal of Hydrogen Sulfide up to 3 ppm	✓ Not recommended for tannin and organics removal

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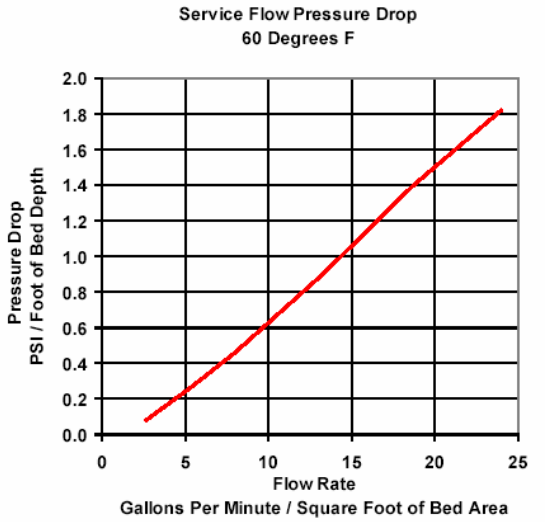
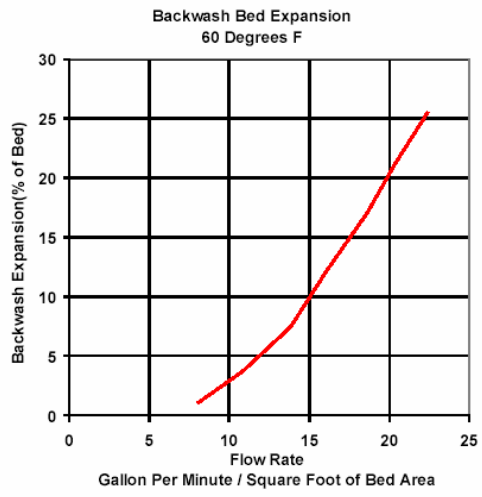
PHYSICAL PROPERTIES

Color	Black
Purity	> 80%
CAS No.	1313-13-9
Physical Form	Granular Particles
Moisture content	< 0.5% as shipped
Bulk Density	125 lbs/cu. ft.
Mesh Size	20 x 40
Effective Size	0.40 (Typical)
Uniformity Coefficient	1.54 (Typical)
Specific Gravity	3.8 grams / cubic centimeter

OPERATING CONDITIONS

pH range	6 - 9
Bed depth	36-48 inches
Service flow rate	8 – 15 gpm per sq. ft.
Backwash flow rate	16 – 24 gpm per sq. ft
Backwash expansion	15 – 30 %
Freeboard	40% of bed depth (min.)
Oxidant Type	Chlorine
Oxidant Form	12.5% Sodium hypochlorite
Oxidant Contact Time	10 – 30 seconds
Typical Oxidant Dosage	0.5 - 2.0 ppm
Regeneration	Continuous with oxidant addition
Removal Efficiency	95 – 99% for iron 99% for manganese
Backwash Frequency	Every 24 hours (typical)





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