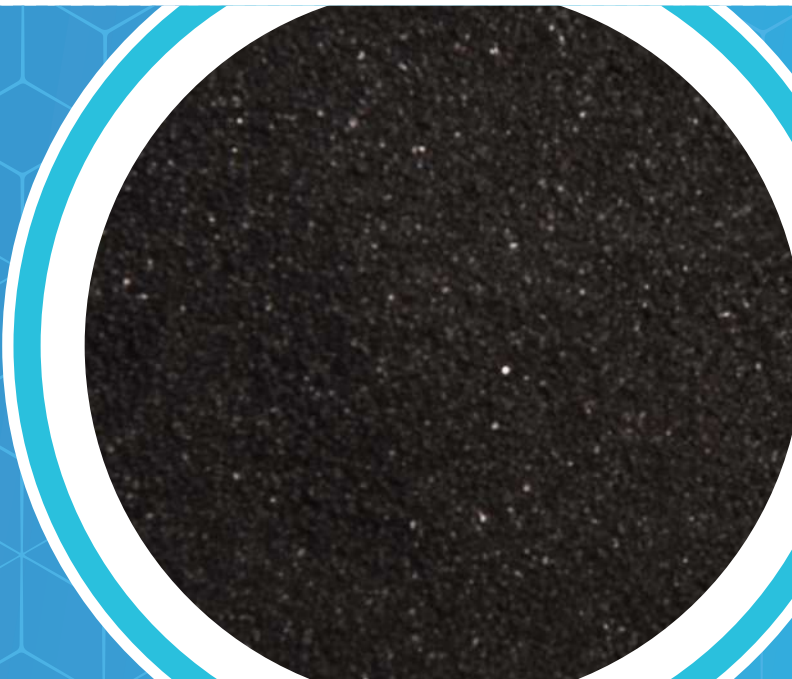


MANGANESE GREENSAND FILTER MEDIA



ADVANTAGES

- **Effective Contaminant Removal:** Manganese Greensand Filter Media efficiently removes iron, manganese, hydrogen sulfide and arsenic from water, ensuring clean and safe drinking water.
- **Cleanest start-up, Highest MnO₂:** of any lightweight media and engineered to be naturally catalytic
- **Regenerable:** Manganese Greensand can be regenerated using potassium permanganate (KMnO₄), extending its operational life and reducing media replacement frequency
- **Simple Operation:** Easy to install and operate, making it suitable for various water treatment systems.

PHYSICAL PROPERTIES

- **Color:** Black to Greenish-black
- **Effective Size:** 0.30 - 0.35 mm
- **Uniformity Coefficient (UC):** < 1.6
- **Specific Gravity:** 2.4
- **Bulk Density:** 1330 Kg/M³
- **Effective Size:** 0.30 - 0.35 mm

CONDITIONS FOR OPERATION

- **Bed Depth:** 15 - 30 inches
- **Maximum Operating Temperature:** No limit
- **pH Range:** 6 - 9
- **Service Flow Rate:** 5 –25 (m/h)
- **Backwash Flow Rate:** 30–45 (m/h)

Regeneration Method for Manganese Greensand Filter Media using KMnO₄ (Potassium Permanganate):

Regenerating manganese greensand filter media with potassium permanganate (KMnO₄) is a common practice to restore its filtration capacity. Here are simple steps for the regeneration process:

Materials Needed:

- 1. Potassium Permanganate (KMnO₄):** Ensure you have the appropriate amount based on your filter size and the degree of fouling.
- 2. Backwash System:** A functioning backwash system connected to the filter.

Step 2: Backwash the Filter

Start by initiating a backwash cycle on your filtration system to remove any loose debris and accumulated contaminants from the media.

Step 3: Prepare the KMnO₄ Solution

In a separate container, dissolve the required amount of potassium permanganate (KMnO₄) in clean, lukewarm water. Use the recommended dosage provided by your manufacturer or water treatment expert. Typically, a concentration of 100 ml of KMnO₄ per cubic foot of media is used.

Step 4: Add the KMnO₄ Solution

Slowly pour the prepared KMnO₄ solution into the filter media tank. Ensure even distribution across the media bed. The media will initially turn purple or pink due to the reaction with potassium permanganate.

Step 5: Let it Stand

Allow the KMnO₄ solution to stand in the filter for a predetermined contact time, typically 15-30 minutes. During this time, KMnO₄ will oxidize and dissolve the accumulated iron, manganese, and hydrogen sulfide deposits within the media.

Step 6: Backwash Again

Initiate another backwash cycle to flush out the dissolved contaminants and excess potassium permanganate from the media.

Step 7: Rinse

Follow the backwash cycle with a rinse cycle to ensure all residual chemicals are removed from the filter bed.

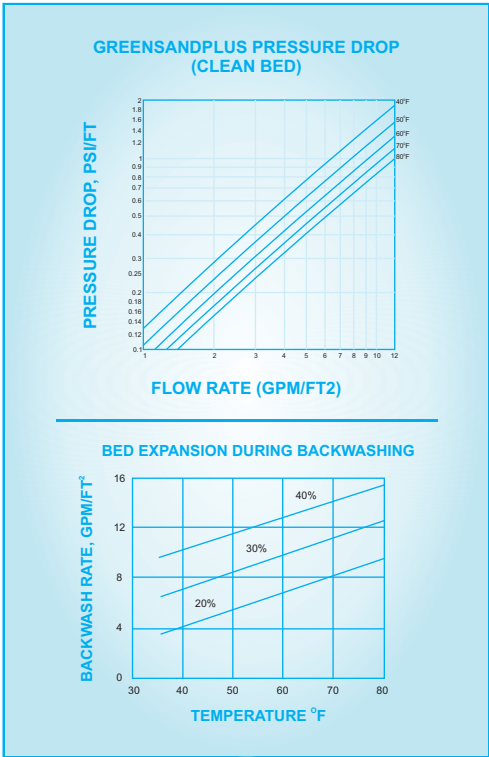
Step 8: Test Water Quality

After the regeneration process is complete, test the water to ensure that iron, manganese, and hydrogen sulfide levels have been effectively reduced to the desired levels.

Step 9: Return to Service

Once water quality meets the desired standards, return the filter to its normal operating mode.

Note: Always follow the manufacturer's guidelines and recommendations for your specific filter system and KMnO₄ application. Proper dosage, contact time, and safety measures are crucial for successful regeneration and safe operation.



STORAGE AND MATERIAL HANDLING

- Keep Manganese Greensand Filter Media in a dry, covered area to prevent contamination and moisture absorption.
- When handling the media, wear appropriate protective equipment, including gloves and goggles, to avoid skin and eye contact.

ORDERING INFORMATION

Description	Weight / Bag	Wt. / Cu.Ft	Bags / Pallet	Weight / Pallet	Pallet Dimensions
Manganese Greensand 0.3 - 0.6 mm	25 Kg	38 Kgs	20	515Kgs	45" x 45" x 32"

- * Weight Per Cubic Foot is Approximate.
- * Custom Sizes Available Upon Request.

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