

Manganese Green Sand Filter Media



Product: Manganese Dioxide (MnO₂)

Formula: MnO₂

Known Name: Manganese Sand, Manganese Green Sand, Manganese Dioxide.

Packing: 50kgs per Bag

Manganese Green Sand is an efficient and economical media for the reduction of dissolved iron and manganese compounds from raw water supplies. It may be used in either gravity fed or pressurized water treatment systems. Manganese Oxide acts as an insoluble catalyst to enhance the reaction between dissolved oxygen (D.O.) and the iron compounds. In ground waters the dissolved iron is usually in the ferrous bicarbonate state due to the excess of free carbon dioxide and is not filterable. It acting as a catalyst between the oxygen and the soluble iron compounds, enhances the oxidation reaction of Fe⁺⁺ to Fe⁺⁺⁺ and produces ferric hydroxide which precipitates and may be easily filtered. The physical characteristics of Manganese Oxide provide an excellent filter media which is easily cleaned by backwashing to remove the precipitant. Manganese Green Sand is not consumed in the iron removal operation and therefore offers a tremendous economic advantage over many other iron removal methods. Other advantages of Manganese Green Sand include; long material life with relatively low attrition loss, a wide temperature performance range and extremely high removal efficiency.

Physical Properties:

MnO ₂	:	25-45%
SiO ₂	:	17-20%
Fe	:	Max 20%
Mn ₂ O ₃	:	10-20%
Proportion	:	3.4g/cm ³
Volume Weight	:	2.2g/cm ³
Silt Content	:	2.5
HCl Soluble Rate	:	<3.5%
Wear Rate	:	≤1.0%
Breakage Rate	:	≤1.0%

Advantages of Manganese Green Sand:

1. Mechanical strength, steady chemical property, long life cycle and stable quality
2. Large specific surface area, good adsorption
3. High chemical activity, good oxidation and catalysis effect
4. Good density, even particles, small wastage rate during back washing (back washing time: 5-15minutes)
5. Outstanding effect on deironing and demanganization
6. Lixivium is harmless

Application:

The manganese sand filter media ($\text{MnO}_2 \geq 35\%$) is commonly used in the deferrization, demanganization of drinking water, siphon filters in water plant and filter tanks.

The manganese sand filter media ($\text{MnO}_2 \leq 30\%$) is applied to the deironing of sewage whose iron content is less than 20mg/L.

Package and Storage:

250kg per bag,

Store in waterproofing places, avoid mix-storage with other chemical materials.