TECHNICAL DATA SHEET

Manganese Dioxide (MnO₂)

Process of natural oxidation of iron and manganese is very slow. Requirement in Industries calls for rapid oxidation.

MnO₂ is used as catalyst in contact filter for rapid oxidation of dissolved iron and manganese. which are present in the form of ferrous and manganous salts. Dissolved oxygen oxidizes these salts to insoluble ferric and manganic salts.

pH of incoming water has to be corrected to around 9 for ferrous salts and 9 to 10.5 for manganous salts. Air is injected into inlet water to provide sufficient dissolved oxygen for oxidation.

 $2Fe_{2+} + \frac{1}{2}O_2 + 5H_2O \rightarrow$ 2Fe(OH)₃ $Mn_{2+} + \frac{1}{2}O_2 + H_2O \rightarrow$ $MnO_2 + O_2 + 2H$

Residence time in contact filter depends iron and manganese load in the inlet water.

Applications

- 1. Catalyst for oxidation of dissolved ferrous & manganous salts.
- 2. Drying agent for paints and varnishes
- 3. Manufacture of dry batteries
- 4. For imparting brown glaze to earthenware and tiles.

Specification

Appearance Specific Gravity Particle size Bulk density Packing

Brown-Black particles 4 approx. 2 - 5 mm and 5 - 10 mm 1.80 gm/cc approx. 50kg bag



: Village - Domoduge (Jeenaram Mondal), Bonthapally - 502 313, Dist. - Medak (A.P.), Phone : 040-31008864 Factory

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