

# DMI-Plus

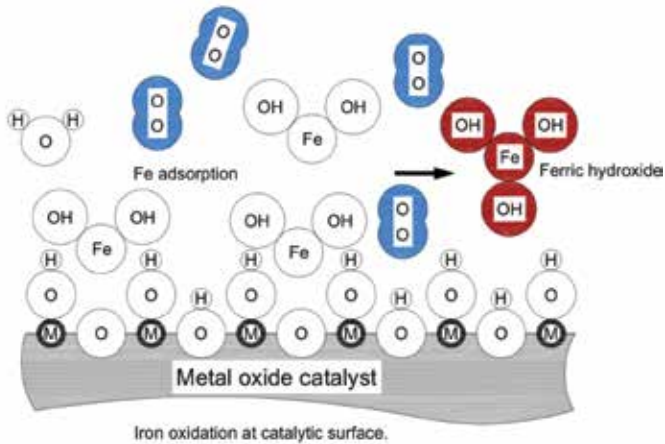
## Extremely Powerful Catalytic Water Filtration Media

DMI-Plus is an extremely powerful catalytic water filtration media that is designed for the removal of iron and manganese in aqueous solutions water without the need for potassium permanganate or chemical regeneration. This media displays colour from dark brown to black, in which the colour is produced by Manganese Oxide in the outer layer of the granules. DMI-Plus acts as an oxidation catalyst with immediate oxidation and filtration of the insoluble precipitates derived from this oxidation reaction.

- Lowest cost in Iron and Manganese treatment
- High ability in removing Iron-Manganese
- Regeneration is not required
- Arsenic removal

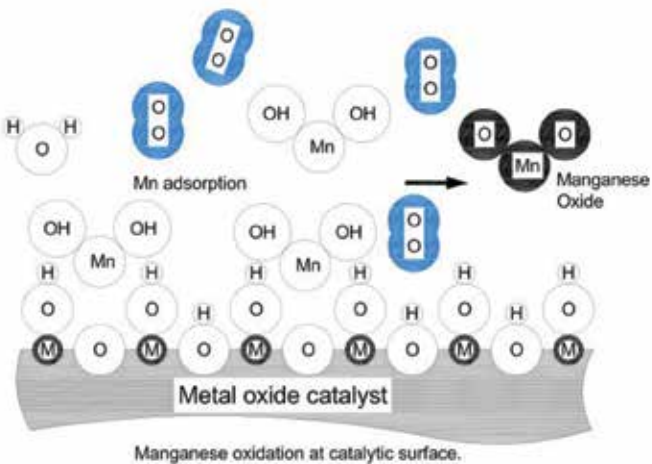
## Iron

Iron (Fe) normally exists in 2 different states - Ferrous (+2) and Ferric (+3); Ferrous iron is commonly found as Ferrous Bicarbonate. DMI-Plus catalytic surface contains Manganese Oxide that oxidizes Ferrous Bicarbonate to Ferric Hydroxide. Insoluble Ferric Hydroxide will then be removed through media surface.



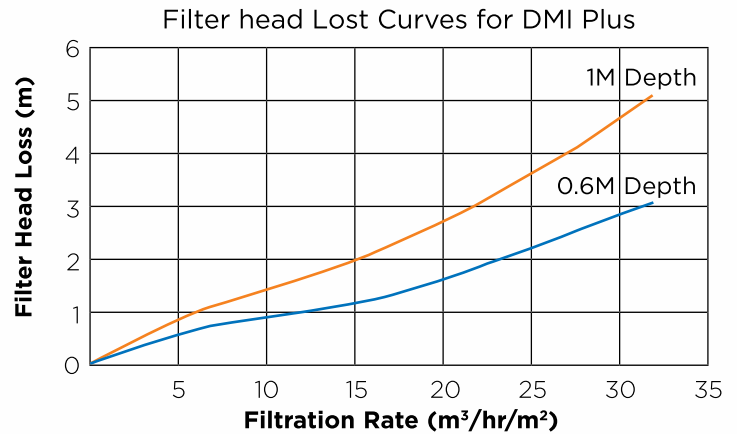
## Manganese

Catalytic surface of DMI-Plus oxidizes manganese to manganese hydroxide, in which it will be adsorbed and swapped with molecular oxygen in the lattice on catalytic surface.



## Head Loss

The pressure drop correlates with the water velocity through the filter and media depth. The chart below shows pressure drop with different media bed depth, 0.6m and 1m.



## Linear Velocity for Iron & Manganese Concentrations

Iron Concentration	Linear velocity	Manganese Concentration
0.3 - 1.0 ppm	15 - 20 m³/hr/m²	-
1 - 5 ppm	10 - 15 m³/hr/m²	-
5 - 15 ppm	7 - 10 m³/hr/m²	0.5 - 1 ppm
> 15 ppm	5 - 7 m³/hr/m²	1 - 2 ppm

## DMI-Plus Physical and Chemical Characteristic

Physical Properties	Specification
Color	Brown to Black
Bulk Density	1460kg/m³
Specific Gravity	2.69
Effective Size	0.3 - 0.6mm
Uniformity Coefficient	1.4
pH Range	5.8 - 8.6
Max Water Temp.	50°C

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