

## Manganese Dioxide

Size range 0.8 – 1.50mm

### Application

Used in water filtration to remove hydrogen sulphide, iron and manganese from potable waters by catalytic oxidation.

### Characteristics

Source: Southern African  
Appearance: Black granular mineral  
Specific Gravity: 3.8  
Bulk Density: 2 tonnes / m<sup>3</sup>

### Chemical Analysis

- A natural crushed ore without additives and free from contamination
- Manganese content = 80%+ as MnO<sub>2</sub>
- Moisture content less than 1% by weight
- Hardness: 5 – 6 Moh

### Mechanical Analysis

Partide size distribution

> 1.5mm	:<5%
1.5-0.8mm	:>90%
<0.8mm	:<5%
Effective size, D <sub>10</sub>	:0.85-0.95mm

### Backwashing

Frequent and thorough back-washing is essential for long-term success. The specific frequency of regular backwashing is dependent on water quality and application rate. Typical filtration rate is 9m<sup>3</sup>/m<sup>2</sup>/hr. Typical backwash rates are 15 to 25m<sup>3</sup>/m<sup>2</sup>/hr.

### Catalytic Activity

A mixture of manganese dioxide and sand in a filter bed will normally reduce the concentration of manganese and iron in water from 0.5mg/l and 3mg/l to 0.02mg/l and 0.05mg/l respectively (given the correct conditions of alkalinity and pH).

Manufactured to EN 13752

ISSUE DATE MARCH 2017 [www.irwin-aggregates.com](http://www.irwin-aggregates.com)

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