



# Technical Data



# HARCOURT

MINERALS

## Manganese Dioxide

<b>Product</b>	Manganese Ore Type QF11, screen washed and dried		
<b>Uses</b>	Catalytic iron and manganese removal from potable water		
<b>Physical Properties</b>	Specific Gravity (reference water at 20°C)	3.5-4.0	
	Bulk density	1950-2050kg.m <sup>-3</sup>	
	Hardness	6 Mohs	
	Grain shape	Sub Angular	
<b>Chemical Properties</b>	Natural manganese ores specially selected for their high catalytic activity, free from contamination and with no additives are used in the production of this media. The manganese content varies between 74 and 82% as MnO <sub>2</sub> but the catalytic activity is not dependent upon the manganese content.		
	<b>Typical Chemical Analysis</b>		
	Mn	51%	Al as Al <sub>2</sub> O <sub>3</sub> 4.1%
	Fe	3.3%	Si as SiO <sub>2</sub> 1.4%
<b>Mineralogy</b>	A natural manganese ore comprising the mineral cryptomelane and to a lesser extent lithiophorite.		
<b>Particle Size</b>	BS18/44 mesh, 0.355 - 0.850mm. A maximum of 5% of the product is coarser than 0.850mm and a maximum of 5% is finer than 0.355mm. Additionally, no more than 10% of the product is finer than 0.425mm.		
<b>Industry Standards</b>	CSA certified to NSF/ANSI 61		
<b>Method of use</b>	<p>The usual procedure for use in rapid gravity and pressure filters is to add up to 20% by volume of manganese dioxide to a bed of BS16/30 (0.50 - 1.00mm) or BS14/25 (0.600 - 1.18mm) sand.</p> <p>After backwashing the manganese dioxide will remain evenly distributed throughout the bed thus ensuring maximum contact time between the water and the catalytic medium.</p> <p>The prepared sand and manganese dioxide bed should be backwashed gently before service, it is not necessary to backwash the sand before placing the manganese dioxide. Five bed volumes are usually sufficient to complete the washing after which the bed may be put into service discarding the first half bed volume of filtered water.</p> <p>A hypochlorite soak followed by a rinse will sterilise the bed and ensure that the bed is fully oxidised prior to use. Other applications may benefit from filter beds of 100% manganese dioxide.</p>		
<b>Packing</b>	25kg bags palletised and shrink-wrapped   Bulk bags palletised		



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