## **GEMGATE** Limited



## **MEDIA: BIO-FILTER**

CE

## **Technical Data**

BIO-FILTER 100 (100m²/m³)	BIO-FILTER 150 (150m²/m³)
Dimensions: 54 x 54 x 50 cm	Dimensions: 55 x 55 x 50 cm
Volume: 0.1458 m <sup>3</sup>	Volume: 0.15125 m <sup>3</sup>
Number of Blocks per m <sup>3</sup> : ~ 6.9	Number of Blocks per m <sup>3</sup> : ~ 6.6
Weight (dry): 6.5 kg	Weight (dry): 8.5 kg
Material:PE (polyethylene) – environmentally friendly material	Material:PE (polyethylene) – environmentally friendly material



Picture merely serves illustration

BIO-FILTER can be used as a submerged media in an aerated/aerobic chamber.

The BIO-FILTER is made from the environmentally friendly material polyethylene (PE) and consists of net tubes, which are welded together to form a rectangular block. The unique surface of the numerous net tubes provides a large accessible surface area for enhanced biological growth on the filter media. The surface acts as a substrate for specialised bacterial strains, which in turn are able to treat and degrade a wide range of wastewater qualities.

The treatment capacity of a biological filter basically depends on the quantity of bacteria that the filter can accommodate. In other words, a larger specific surface area provides a habitat for a larger bacterial population.

Future construction, refurbishment or upgrading of biological wastewater treatment plants is merely a matter of creating optimal "living conditions" for the bacteria. The bacteria must thrive on the substrate in order to perform. BIO-FILTER has excellent features in this respect. Please see the main features of the BIO-FILTER below:

## Features of the BIO-FILTER:

- 1. The surface is rough as this enables an expeditious accumulation of the biological membrane.
- 2. The BIO-FILTER is constructed in such a way that it is possible to clean it on the spot, i.e. the holes are vertical from end-to-end.
- 3. The structure of the BIO-FILTER ensures a sufficient aeration of the media block (a sufficient high porosity).
- 4. The structure of the BIO-FILTER is designed that the washed off parts of the bio-film can pass through the filter (no clogging).
- 5. The BIO-FILTER is constructed in round oval threads. A growth on these threads will increase the diameter and thus increase the active surface. This effect is not achieved by a filter medium with a plain surface.
- 6. The BIO-FILTER is biologically and chemically un-degradable.
- 7. The BIO-FILTER is mechanically strong in order to sustain overlying material.
- 8. The BIO-FILTER is UV-stable and can withstand variations of temperature.
- 9. The BIO-FILTER is made from environmentally compatible material PE (not PVC).
- 10. It is possible to remove the BIO-FILTER for service, cleaning or reuse in other plants.
- 11. The BIO-FILTER has a sturdy structure and permits a person to stand on it. This is an advantage when performing the service of wastewater treatment systems.
- 12. The BIO-FILTER can be cut to suit all types of tanks <u>without any essential waste</u>. Any remaining pieces can be fitted to complete blocks (i.e. with the help of cable-binders).