

COUGAR COATINGS Estd. 1988 WASTEWATER DIVISION

Supplying unique solutions for the water and waste water industry



BIO-BLOK® INTELLIGENT FIXED FILM BIOLOGICAL FILTER MEDIA

2.2.1. Aerobic Filter

Biological treatment by means of BIO-BLOK® as submerged, aerated filters

When treating waste waters, different types of wastewater treatment systems can be used. Common to the biological systems is that a given concentration of micro-organisms has to be present. The concentration of micro-organisms determines the velocity of decomposition in the wastewater treatment plant. An increase of the concentration of micro-organisms can be achieved by installing BIO-BLOK®. With BIO-BLOK®, a bigger surface is established on which the micro-organisms can settle, thus the concentration of micro-organisms per volume unit increases. By using BIO-BLOK®, the velocity of decomposition in a treatment plant increases, and, consequently, the treatment capacity of the system increases.

It is obvious that it is a big advantage to install BIO-BLOK® in a wastewater treatment plant. The efficiency of an existing plant can increase by up to four times if BIO-BLOK® products are placed in the bioreactor. However, the aeration has to increase almost proportionally. When aeration only has to increase "almost proportionally", it is due to the fact that there is a better utilisation of the supplied oxygen in a bioreactor constructed with BIO-BLOK® than in an activated sludge system.

By using BIO-BLOK® in a wastewater treatment plant, the following advantages, besides the already mentioned, are achieved: The system is more stable, it is able to resist great variations in load, and it is less sensible towards toxins.

EXPO-NET's BIO-BLOK® is:



- A recently developed special product.
- Made from the imperishable and environmentally compatible material - polyethylene.
- Produced with a special surface structure that ensures a quicker development of the biological treatment ability.
- Constructed as self-supporting modules.
- Self-cleaning with a big area of flow.
- Easy to handle.
- Easy to adjust to both existing and new plants.

VAT Registration Number 491201374

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Technical specifications of BIO-BLOK®

| Type of filter media | BIO-BLOK® 100 | BIO-BLOK® 150 | BIO-BLOK® 200 | BIO-BLOK® 300 |
|--------------------------------------------------------------|---------------|---------------|---------------|---------------|
| Specific surface (m ² /m ³) (approx.) | 100 | 150 | 200 | 300 |
| Area of flow (approx.) | 70% | 64% | 60% | 50% |
| Percentage of hollow space (approx.) | 90% | 88% | 82% | 65% |
| Tube diameter | 70mm | 55mm | 55mm | 30mm |
| Standard module form | 54x54x55cm | 55x55x55xcm | 55x55x55cm | Loose tubes |

The surface measurements have been calculated by the producer. Alterations in process, material and structure may slightly change the figures above (by up to 10%). Above filter media are available with densities of approx. 0.5 and 0.95.

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