

PRODUCT SPECIFICATION OF FILTRAMAR[®] MG

Filter media

Quality MG Coarse

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|------------------|--|
| Commercial name | FILTRAMAR [®] Quality MG Coarse |
| Density | Bulk density: 800 kg/m ³ Particle density: 1400 kg/m ³ |
| Type of material | Shell sand |
| Appearance | Angular and sub-angular particles, with high porosity |
| Manufactured by | Boston AS, Norway |

| Sizes and densities | Value | Deviation | Comments |
|-----------------------------|------------------------------|--|-----------------------------|
| Effective size | 0,9 mm | >7 mm max. 2 % | d10, approximate value |
| Particle size range | 0-7 mm | | |
| Coefficient of uniformity | < 4 | ± 100 kg/m ³ ± 200 kg/m ³ | d60 / d10 NS-EN ISO 7837 |
| Bulk density, dry | 800 kg/m³ | | |
| Particle density, dry (PDD) | 1400 kg/m³ | | |
| | | | |

| Other properties | Value | Comments |
|--|------------------------------|--|
| Particle porosity | 50 % | Approximate value. Porosity internal particle: (1-PDD/2800 kg/m ³)*100 % |
| Voids | 38-44 % | Approximate value. EN 1097-3 |
| Total surface (BET value) | 3000 m²/kg | BET measurements, ER method 93/19 (Euroc Research) |
| pH | 8,0-8,5 | NS 4720, measured at atmospheric CO ₂ balance |
| P adsorption (isothermic) | 4,0 g/kg | Adsorption by mixing and shaking method |
| <u>Hydraulic conductivity, calculated (Hasen's equation)</u> | 500 m/d | Clean water |
| K | 200 m/d | Filter media with wetland plants, pre-treatment in septic tank and aerobic bio filter or equivalent system |
| K dim | | |

The sewage water has to be pre-treated in septic tank and aerobic bio filter (or equivalent system) before the Filtramar[®] MG filter bed. Recommended loading of pre-filtrated municipal wastewater: 3-4 m³ Filtramar[®] MG / p.e. (p.e. = 0,6 kg P /year)

All values are based on assumption of use of the filter material in saturated reed bed / constructed wetlands with long retention time and use of typical municipal wastewater. We strongly recommend use of consultants or system suppliers for sizing and design of wetland systems.

DISCLAIMER: Key data are for the purpose of dimensioning the plant. Management of the plant and conditions beyond the terms of the producer, affecting lifetime of the filter, are the responsibility of the plant owner.

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