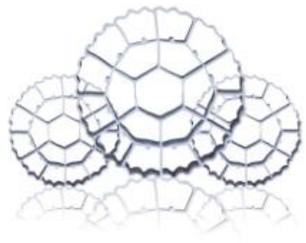


Nanxiang Moving bed biological packing

Pingxiang Nanxiang Chemical Packing Co., Ltd.



MBBR Filter Media Product Introduction

Mobile bed biofilm reactor(MBBR)is an effecient biofilm technology,which combines the advantages of traditional fluidized bed. The MBBR process adds a certain amount of suspended filler(biofilm carrier)to the reactor,and in the protected area of the filler,different microorganisms(from bacteria to ciliates to rotifers)concentrate on the biofilm.Some anaerobic or aerobic bacteria are grown inside the carrier,while aerobic bacteria are grown outside. Each carrier is a micro-reactor,which ensures extensive and frequent contact between waste water and biofilms on the carrier,either through blast aeration in the aerobic treatment system or stirring in the anaerobic treatment system. While improving the mass transfer efficiency of the system,the renewal of biofilm microorganisms should be strengthened to maintain and improve the activity of biofilm. The suspended carrier and the original activated sludge form a more complex ecosystem and the biofilm attached to the carrier greatly increases the active biomass in the reactor. Under the joint action of suspended activated sludge and biofilm on the surface of suspended carrier,the impact load resistance capacity of the system is greatly improved, so as to improve the effeciency of sewage treatment and stabilize the effluent quality.

Advantages of MBBR Filter Media

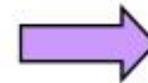
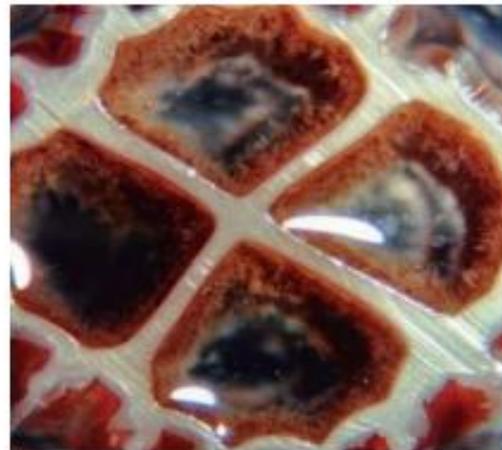
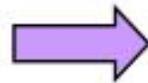
1. Strictly selected materials and special modification: Use virgin HDPE as the raw material with additive of special formula including UV and hydrophilic genes, FDA food grade.
2. More than 100 high speed production lines which can finish 80,000 cubic meter MBBR media per year. We can complete large order in short time.
- 3.High-tech enterprises integrating formula,tooling design,production and logistics,then we can perfectly meet special requirement of customers.
4. Various of MBBR media are designed for aerobic and anaerobic tank.

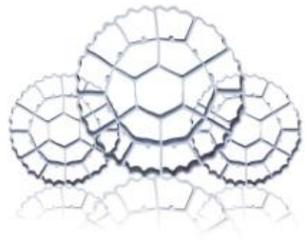
Technical advantages of MBBR Filter Media

1. High hydrophilicity and excellent adhesion to surfaces
2. High bio-activity and bio-film short time
3. High impact resistance and stable operation
4. Less residual sludge
5. High volume load, high filling rate and less land occupation
6. Cost-effective, easy to operate and maintain
7. Rebuild-free, easy to upgrade or expand
8. Long service life: MBBR life more than 15 years

MBBR Filter Media Core Technology

1. Special design of surface, stronger bio-film growth capacity
2. Large specific surface area, high voidage, the more periphyton biomass
3. Unique design of structure and shape according to hydromechanics, strong three-dimensional flow dynamics in the water
4. Adding hydrophilic groups and other trace elements
5. Excellent impact strength, strong gas shear capacity
6. Without any holder, easy to cure, save energy and space





MBBR media bio filter



Product No:PE01(4holes)

Dimeter*Height:12*9mm

Materail: 100% Virgin HDPE

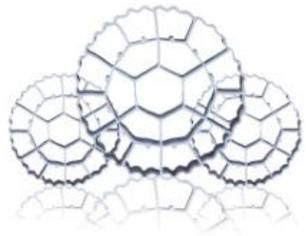
Specific gravity: 0.94-0.97g/cm³

Specific surface area:>800 m²/m³

Number of unites per M3:630000PCS

Porosity:85%

Weight per M3:120kg Service life: > 15years



MBBR media bio filter

Product No:PE02(4holes)

Dimeter*Height:11*7mm

Materail: 100% Virgin HDPE

Specific gravity: 0.94-0.97g/cm³

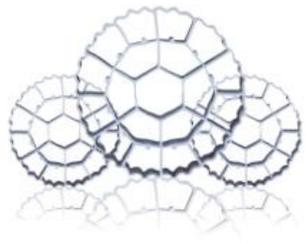
Specific surface area:>900m²/m³

Number of unites per M3:830000PCS

Porosity:85%

Weight per M3:135kg Service life: > 15years





MBBR media bio filter

Product No: PE03(5holes)

Dimeter*Height: 10*7mm

Materail: 100% Virgin HDPE

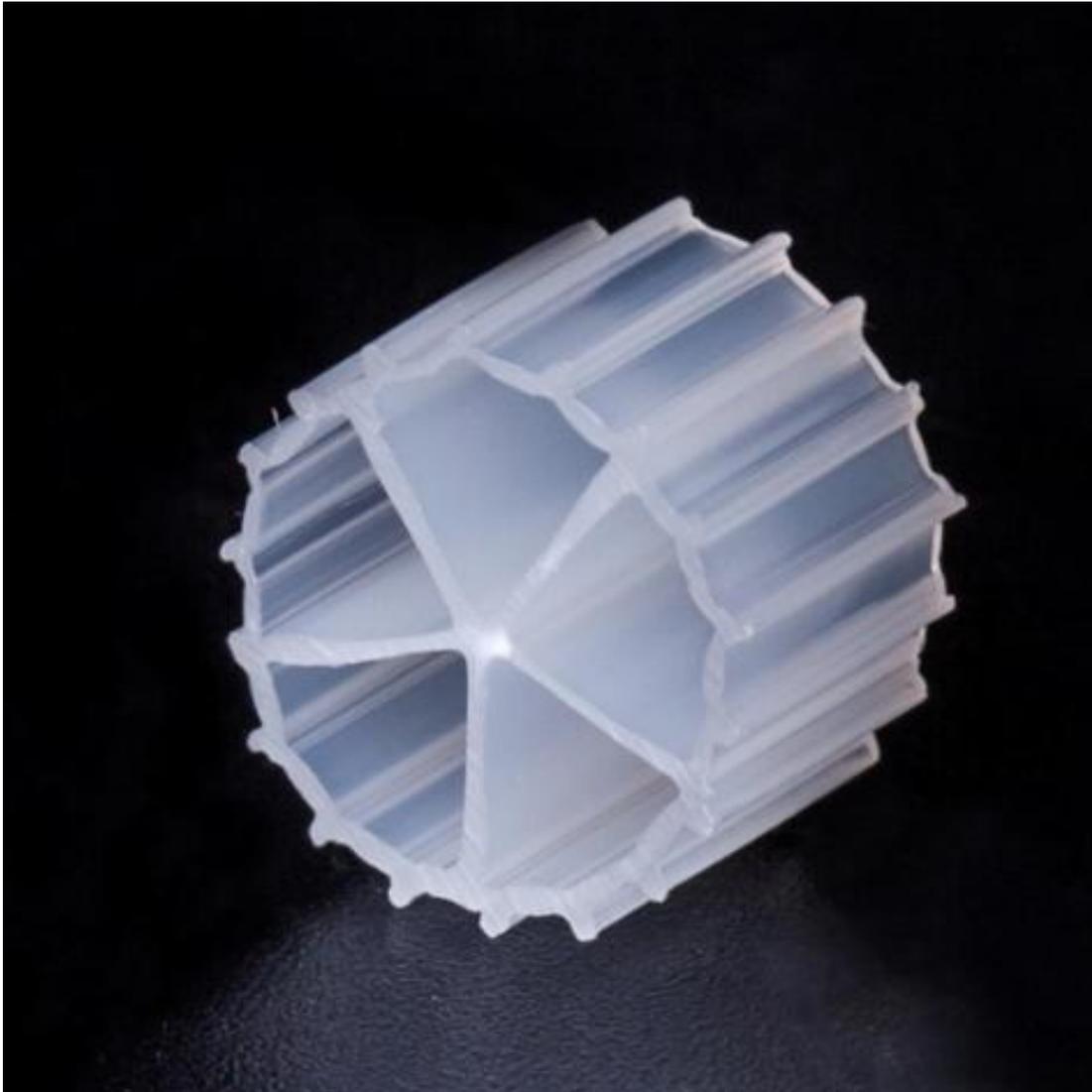
Specific gravity: 0.94-0.97g/cm³

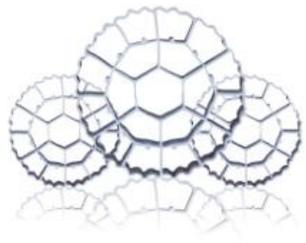
Specific surface area:>1000m²/m³

Number of unites per M3:850000PCS

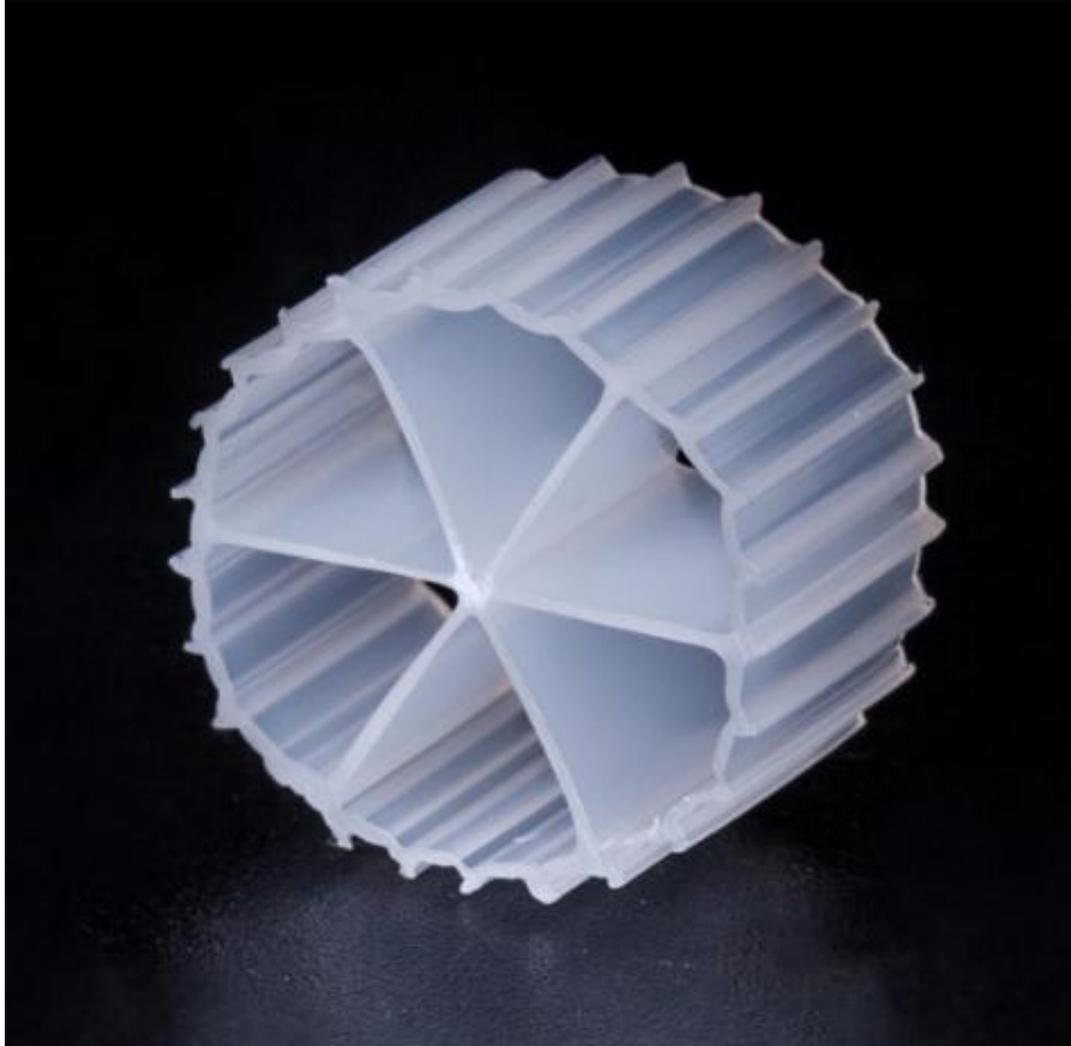
Porosity:85%

Weight per M3:140kg Service life: > 15years





MBBR media bio filter



Product No:PE04(6holes)

Dimeter*Height:16*10mm

Materail:100% Virgin HDPE

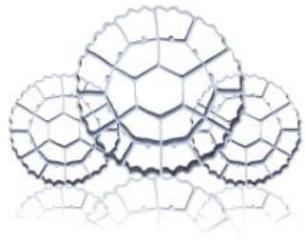
Specific gravity: 0.94-0.97g/cm³

Specific surface area:>800m²/m³

Number of unites per M³:260000PCS

Porosity:85%

Weight per M³:120kg Service life: >15years



MBBR media bio filter

Product No:PE05(19holes)

Dimeter*Height:25*10 or 25*12mm

Material:100% Virgin HDPE

Specific gravity: 0.94-0.97g/cm³

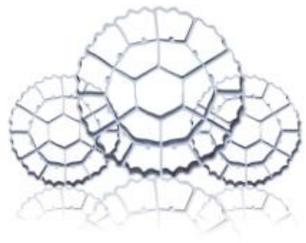
Specific surface area:>600m²/m³

Number of unites per M3:97000PCS

Porosity:85%

Weight per M3:95kg Service life: >15years





MBBR media bio filter



Product No:PE06 (Special anaerobic material)

Dimeter*Height:25*10mm(19holes)

Materail:100% Virgin HDPE Color: black

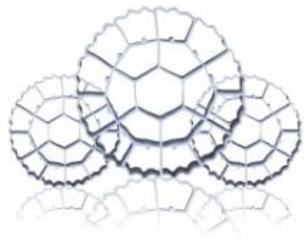
Specific gravity: 0.94-0.97g/cm³

Specific surface area:>600m²/m³

Number of unites per M3:97000PCS

Porosity:85%

Weight per M3:95kg Service life: >15years



MBBR media bio filter



Product No:PE08(8holes)

Dimeter*Height:5*10mm

Materail:HIPS

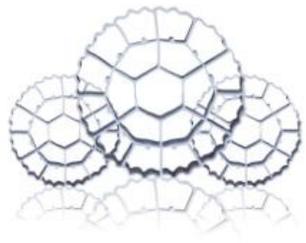
Specific gravity: 1.02-1.05g/cm³

Specific surface area:>3500 m²/m³

Number of unites per M3:2000000PCS

Porosity:80%

Weight per M3:250kg Service life: >15years



MBBR media bio filter



Product No:PE09(8holes 24grooves)

Dimeter*Height:15*15mm

Materail:100% Virgin HDPE

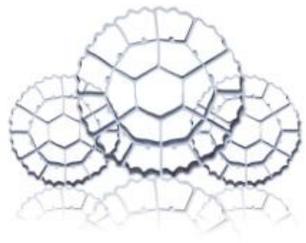
Specific gravity: 0.94- 0.97g/cm³

Specific surface area:>900 m²/m³

Number of unites per M3:230000PCS

Porosity:85%

Weight per M3:175kg Service life: >15years



MBBR media bio filter



Product No:PE10(64holes)

Dimeter*Height:25*4mm

Materail:100% Virgin HDPE

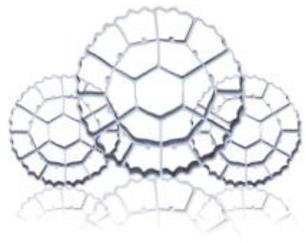
Specific gravity: 0.94- 0.97g/cm³

Specific surface area:>1200 m² /m³

Number of unites per M³:210000PCS

Porosity:85%

Weight per M³:135kg Service life: >15years



MBBR media bio filter



Product :Biochip(microporosity)

Dimeter*Height:30*1.1mm

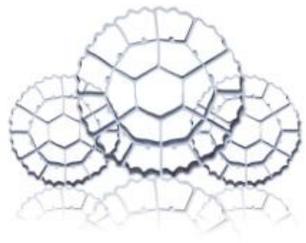
Materail:100% Virgin HDPE

Specific surface area:>5500 m² /m³

Number of unites per M3:>340000PCS

Porosity:85%

Weight per M3:150kg Service life:>15years



MBBR media bio filter



Product No:PE37(37holes)

Dimeter*Height:25*10mm

Materail:100% Virgin HDPE

Specific gravity: 0.94- 0.97g/cm³

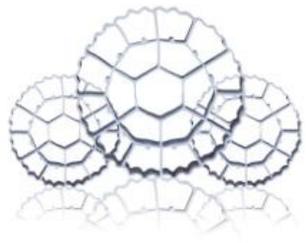
Specific surface area: > 800m² /m³

Number of unites per M3: >118000PCS

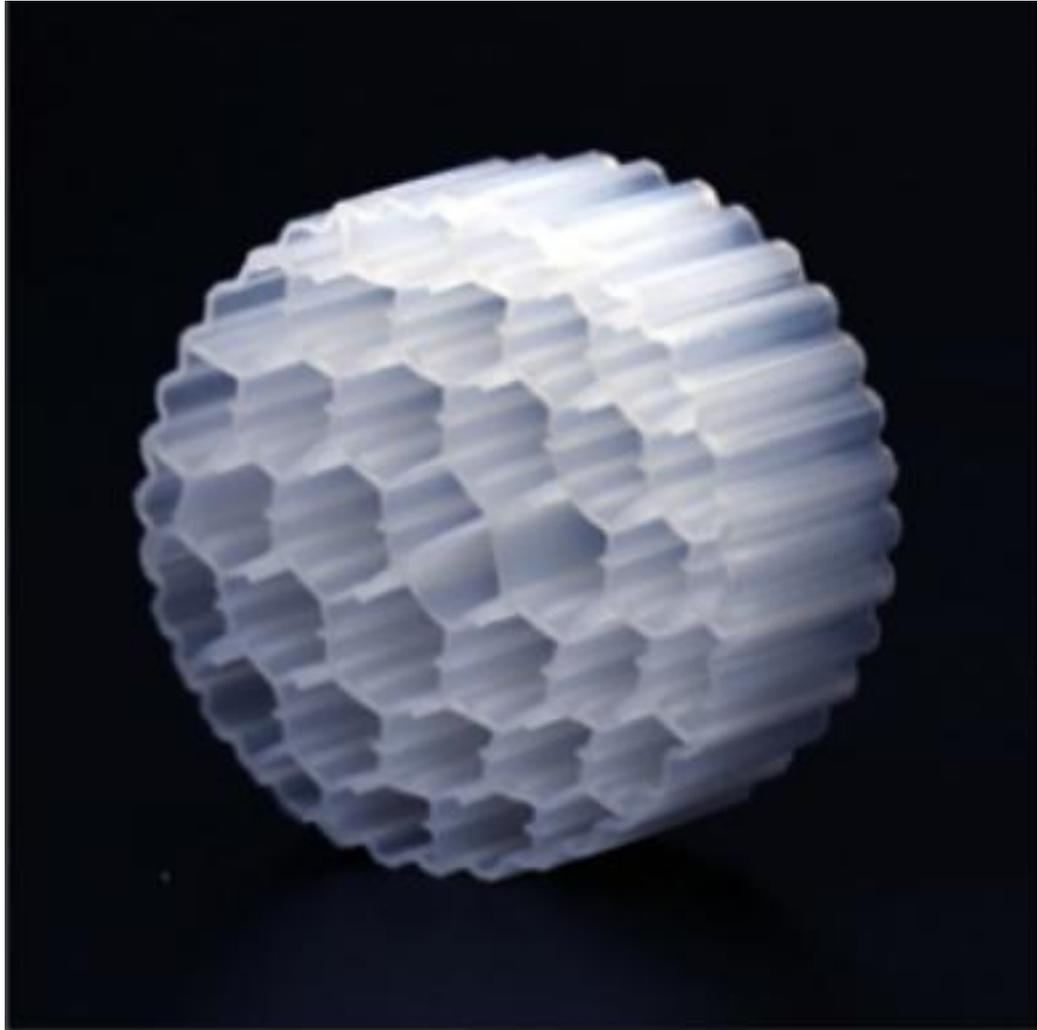
Porosity:85%

Weight per M3:109kg

Service life:> 15years



MBBR media bio filter



Product No:PE38(38holes)

Dimeter*Height:25*10mm

Materail:100% Virgin HDPE

Specific gravity: 0.94- 0.97g/cm³

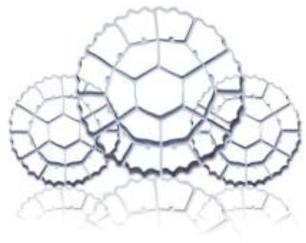
Specific surface area: > 800m² /m³

Number of unites per M3: >118000PCS

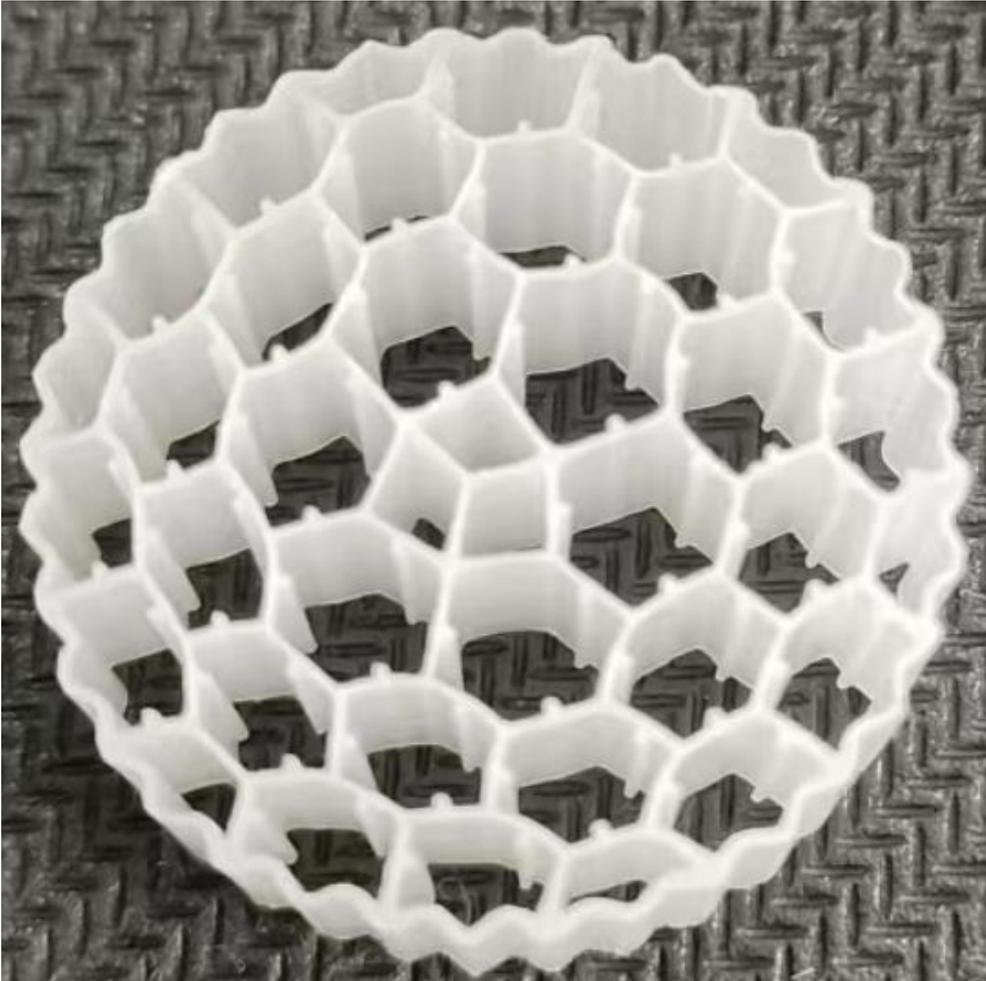
Porosity:85%

Weight per M3:107kg

Service life:> 15years



MBBR media bio filter



Product No:PE39(39holes)

Dimeter*Height:25*10mm

Materail:100% Virgin HDPE

Specific gravity: 0.94- 0.97g/cm³

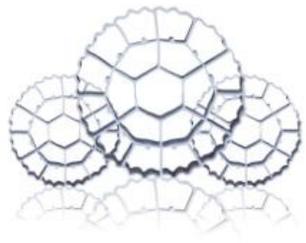
Specific surface area: > 800m²/m³

Number of unites per M3: >118000PCS

Porosity:85%

Weight per M3:109kg

Service life:> 15years



MBBR media bio filter

Product No:PE75S(75holes)

Dimeter*Height:25*4mm

Materail:100% Virgin HDPE

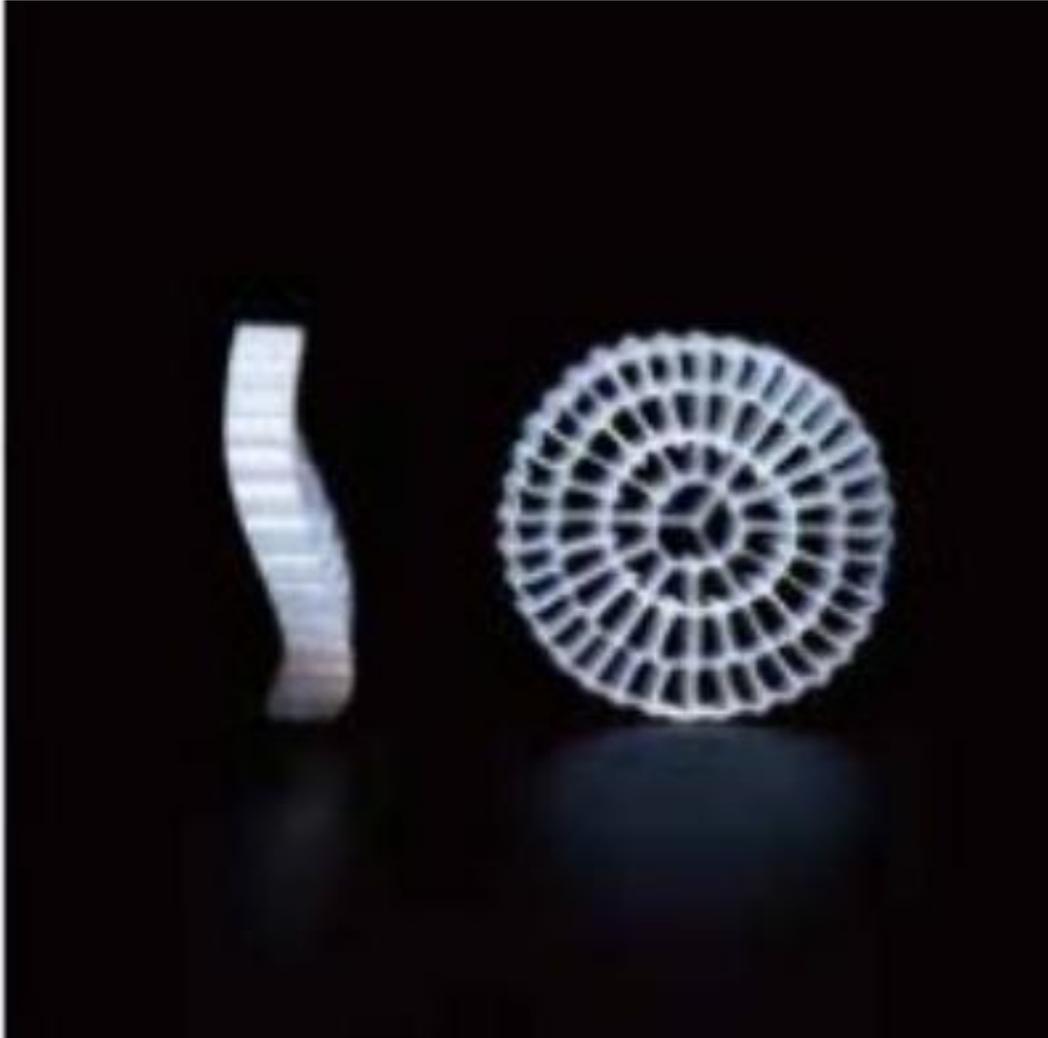
Specific gravity: 0.94- 0.97g/cm³

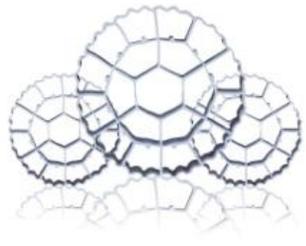
Specific surface area: > 1600m²/m³

Number of unites per M3: >210000PCS

Porosity:85%

Weight per M3:127kg Service life:>15years





MBBR media bio filter



Product No:PE79S(79holes)

Dimeter*Height:25*4mm

Materail:100% Virgin HDPE

Specific gravity: 0.94- 0.97g/cm³

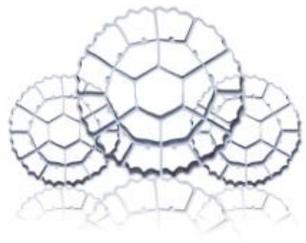
Specific surface area: > 1700m²/m³

Number of unites per M3: >210000PCS

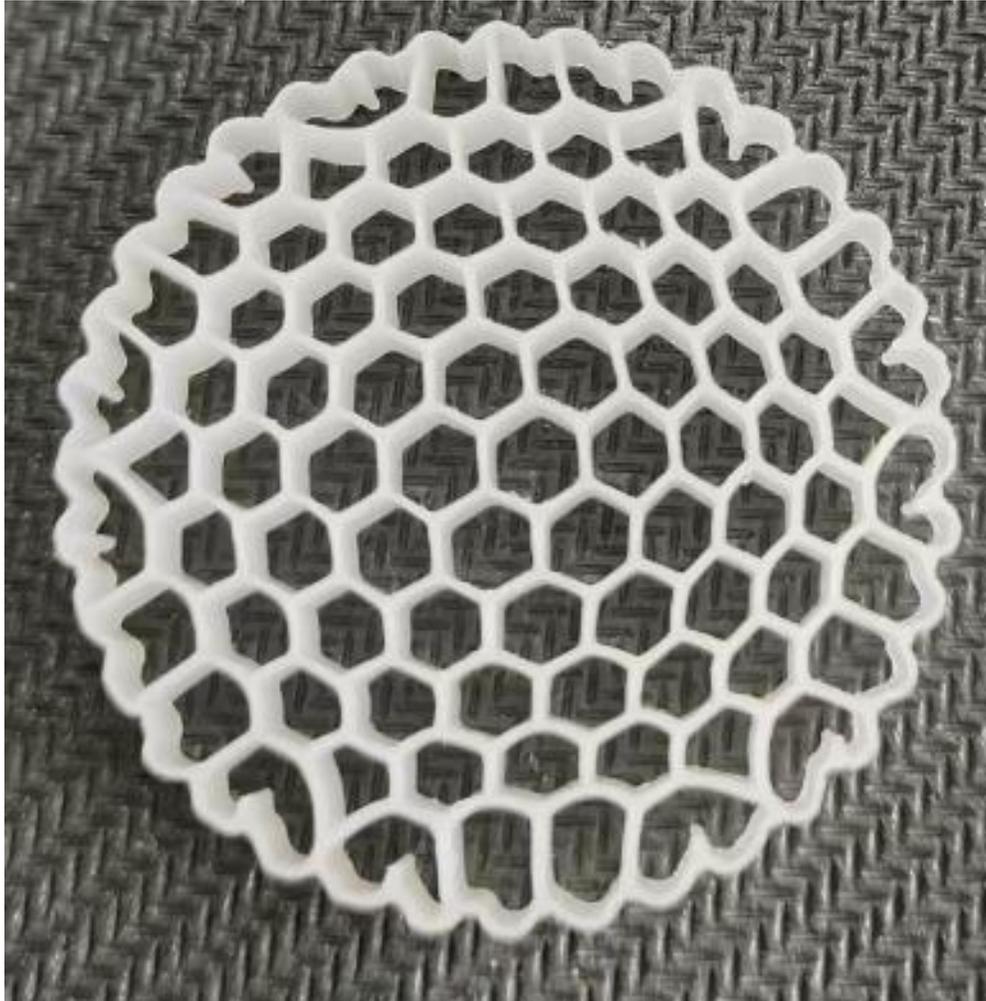
Porosity:85%

Weight per M3:125kg

Service life:>15years



MBBR media bio filter



Product No:PE85(85holes)

Dimeter*Height:36*4mm

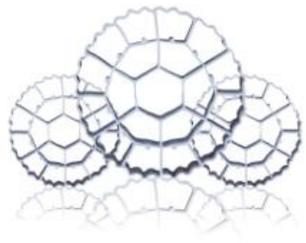
Materail:100% Virgin HDPE

Specific gravity: 0.94- 0.97g/cm³

Specific surface area: > 1200m²/m³

Porosity:85%

Weight per M3:109kg Service life:>15years



Bio Block



Product :Bio Block

Size:235-75mm

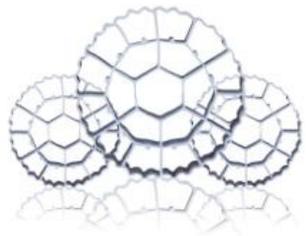
Materail:HDPE

Specific surface area: 150-350m² /m³

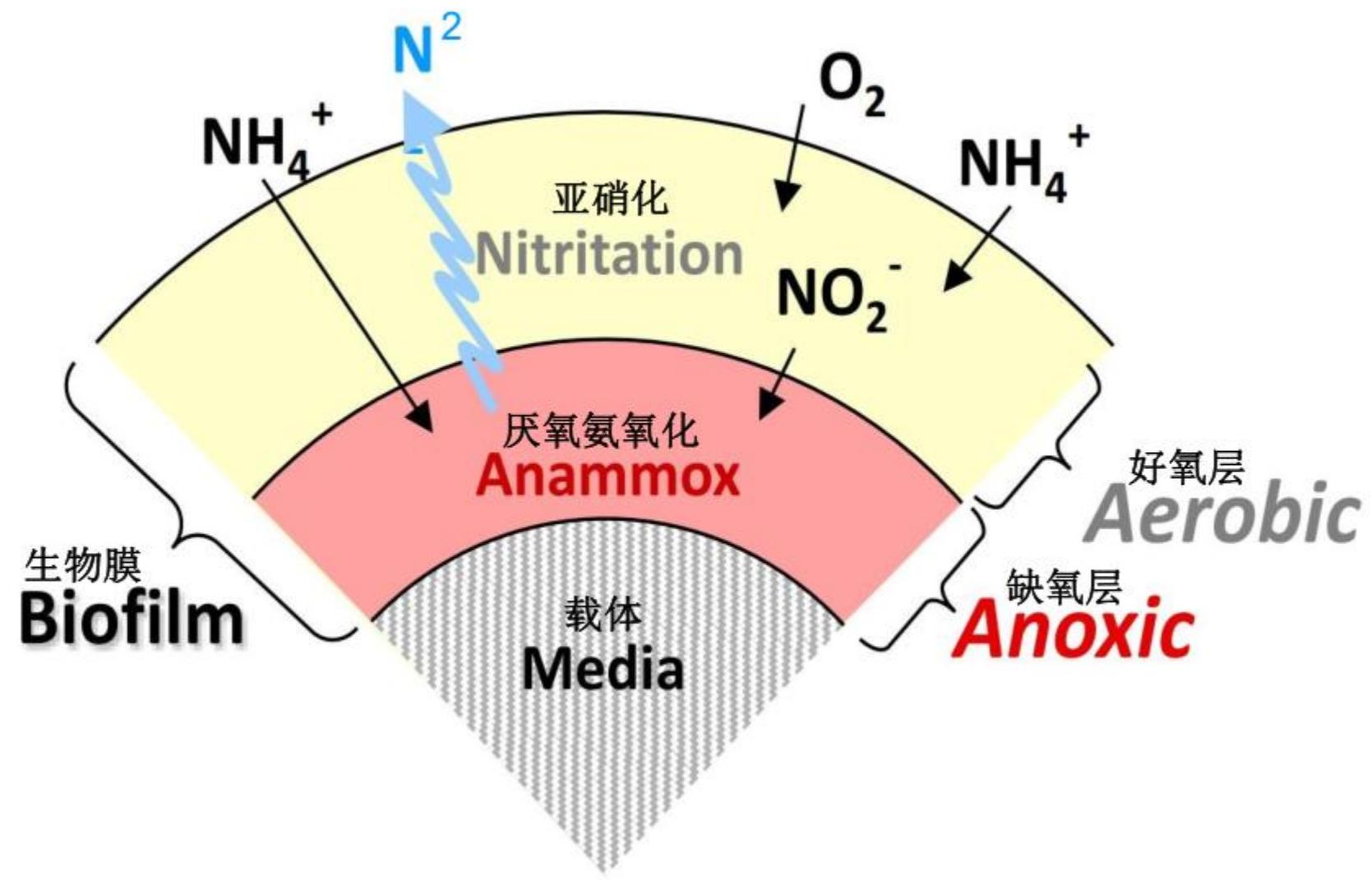
Color: Green/Black

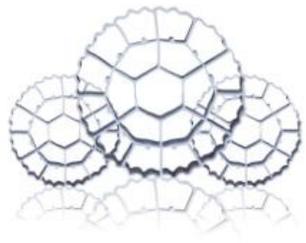
Density: 0.96- 0.98g/cm³

Life Span: >15 years



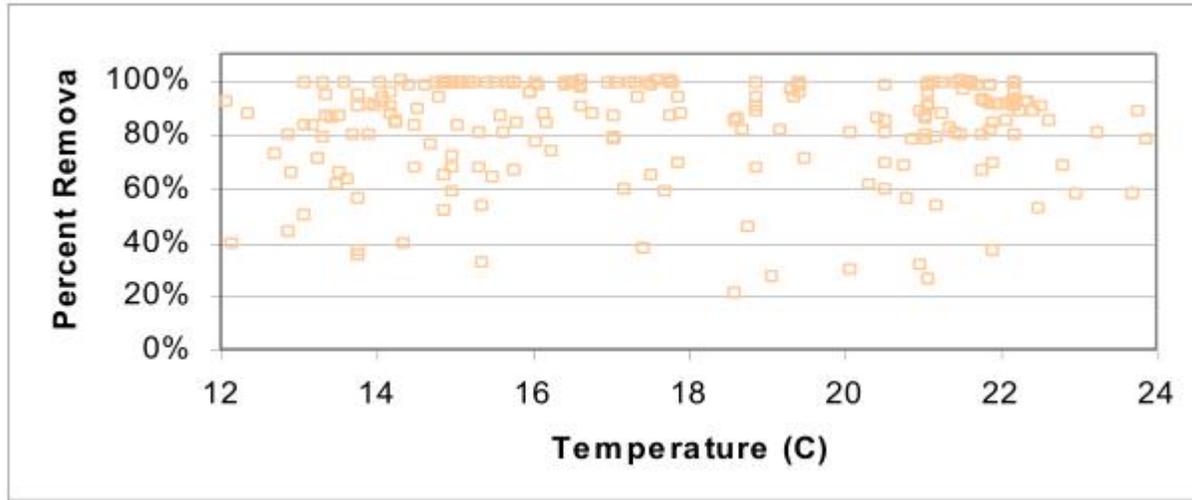
MBBR media bio filter-Nitrification and denitrification



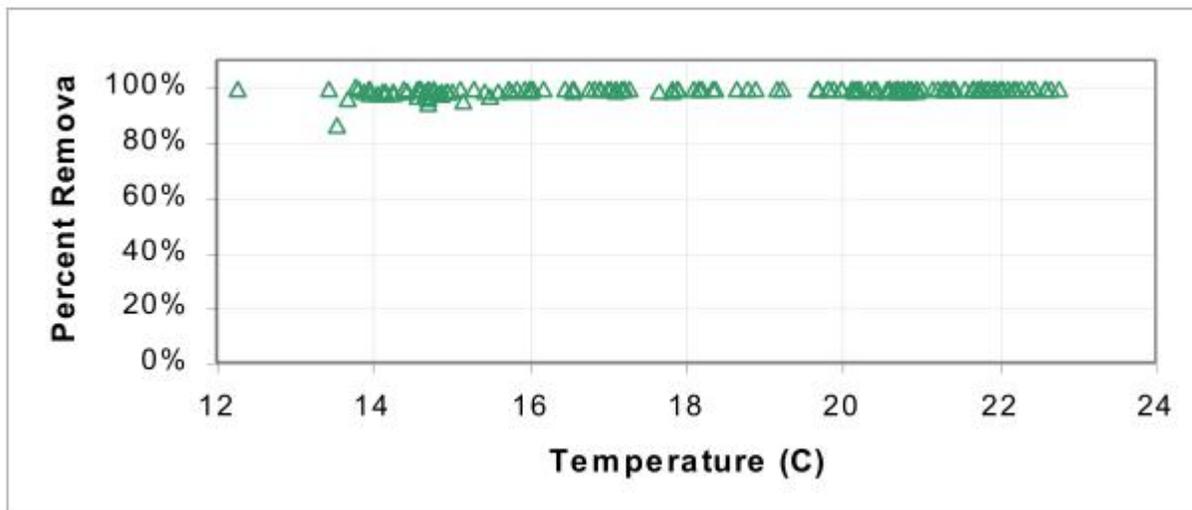


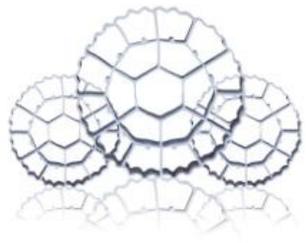
Ammonia nitrogen removal efficiency of comparison

**single activated
sludge process**



**MBBR + combination by
activated sludge process**



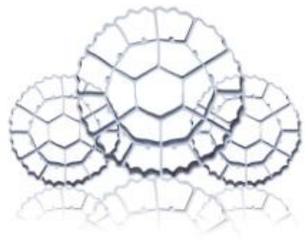


Select key

Key point

- High protection area per unit volume
- Good bio population growing-up feature
- Not easy to jam
- The proportion of appropriate
- Excellent durability

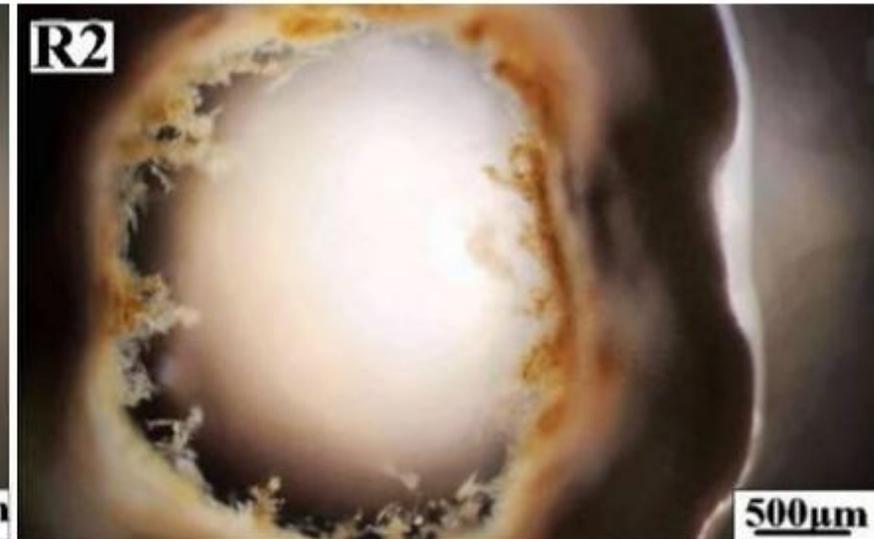


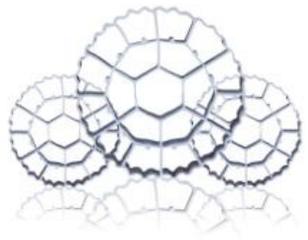


MBBR media bio filter- biofilm culturing initial stage

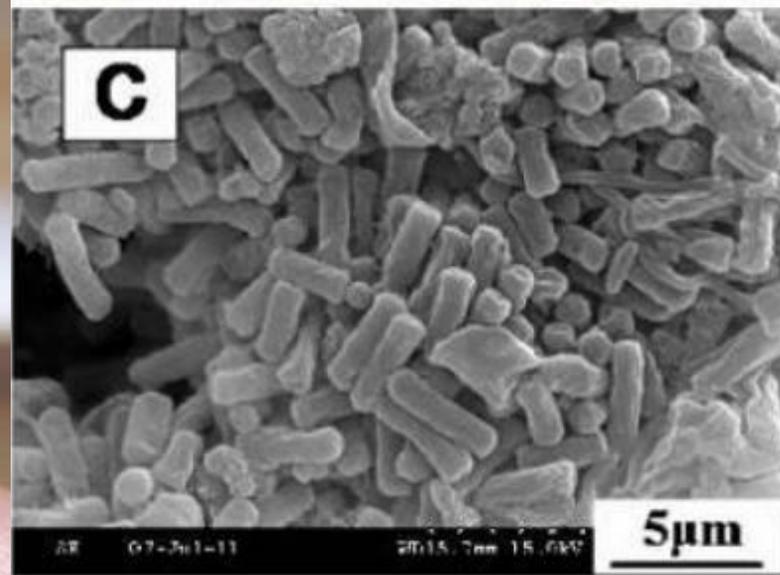
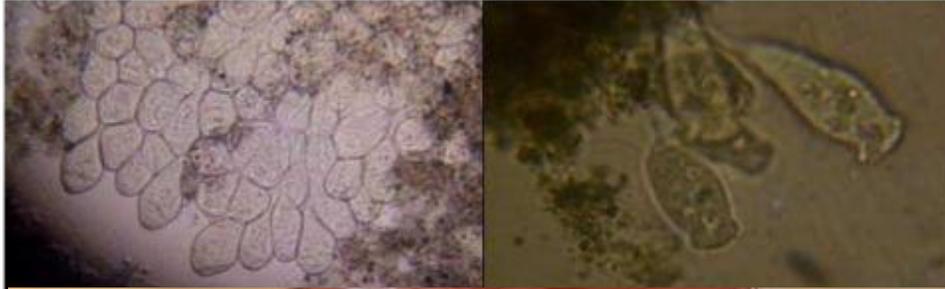


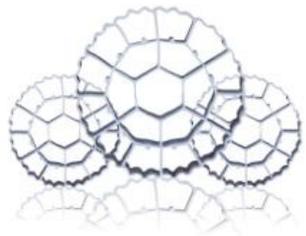
Three days to a week in
biofilm carrier



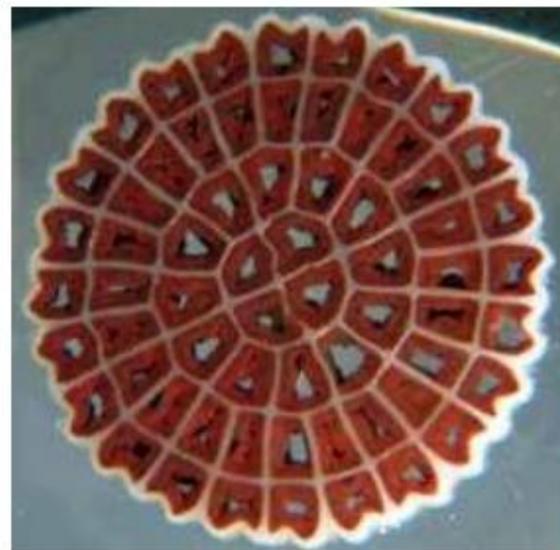
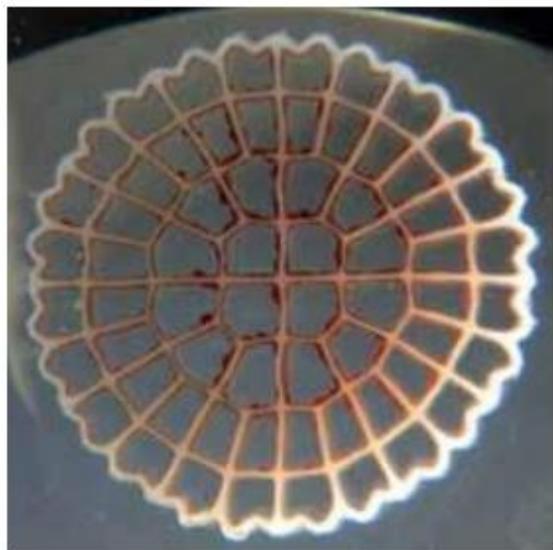
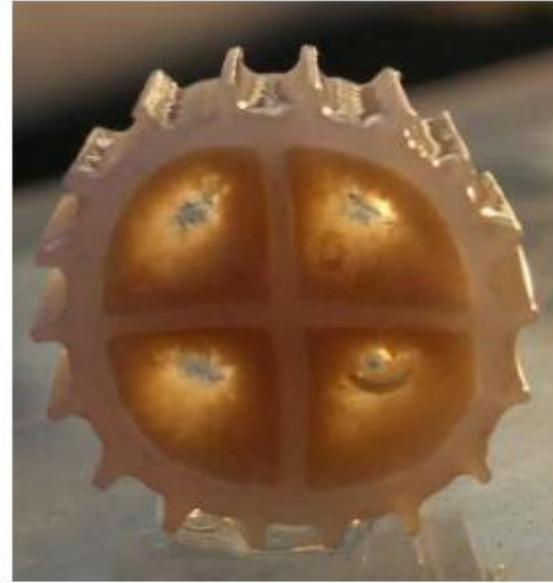
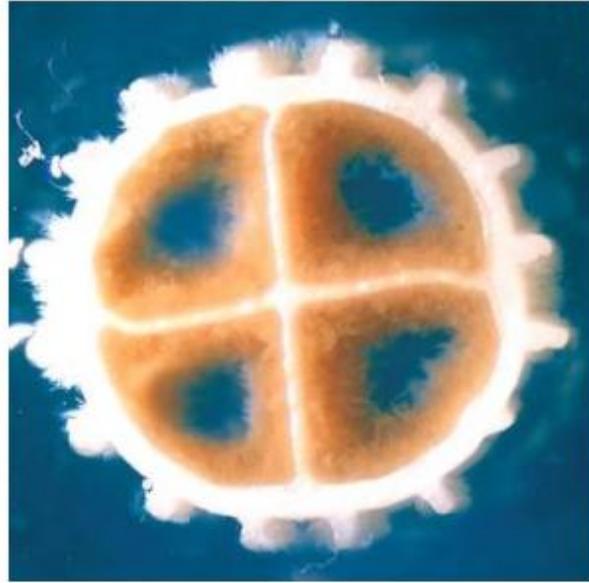


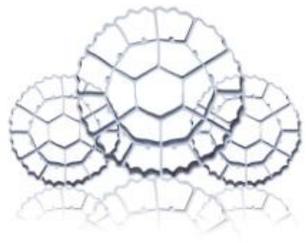
MBBR media bio filter- biofilm maturity





MBBR media bio filter- biofilm process





Select key

We supply a range of biofilter media, This product is sold by the cubic metre. These products are suited to fluidized or moving bed tank systems. These are also called “ Biofilm Reactor (MBBR)” systems and are used for treatment of water and wastewater.

Self cleaning due to turbulence:

Due to the turbulent movement of the biofilter media in suspension, the filter media is self-cleaning ,requiring no maintenance.This allows the filter to reach optimum effectiveness without the disturbance of periodic maintenance,avoiding unnecessary loss of bacteria within the filter.This allows stable,low levels of ammonia and nitrite within the water.

The first few of these products are similar to the patented kaldnes media used in fish farming and waste treatment .The design creates an environment for effective nitrification to take place .Water flow is created by aeration tha circulates the media throughout the vessel .This high surface area of these products traslates into a small physical area needed for the biofiltration unit.

Due to vigorous mixing of the kaldnes-like media through aeration,the media is self-cleaning,Requiring no maintenance.This allows the filter to reach optimum effectiveness Periodic maintenance is not necessary,preventing the unnecessary loss of bacteria and subsequent ammonia and nitrite spikes in the system.

Media volume needed:

with good turbulence and aeration, a feed rate of between 0.25 kgs and 0.75 kgs of 40% protein food per day requires 50 litres of media.