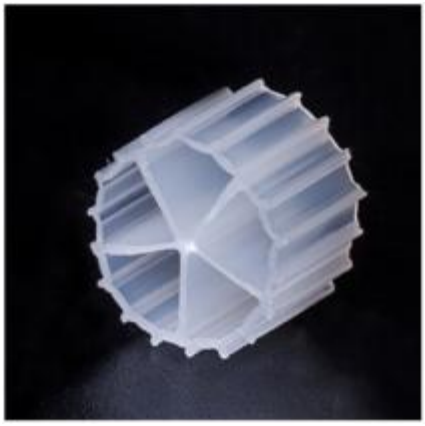
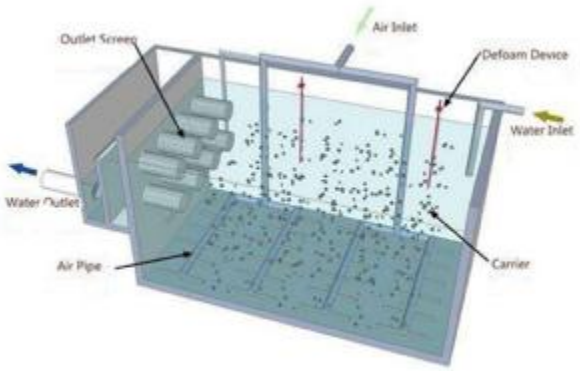
KHN MBBR media introduction document

MBBR media is a new type of biological suspension carrier. It has the advantages of low construction cost, no support, no maintenance and 95% treatment effect. It is a globally recognized sewage treatment process. According to the different nature of sewage, the KHN MBBR media was prepared by mixing a variety of trace elements which were beneficial to the rapid attachment and growth of microorganisms in the polymer material. It has the advantages of large specific surface area, good hydrophilicity and affinity, high biological activity, fast film hanging, good treatment effect and long service life (up to 30 years). It is a good choice for ammonia nitrogen removal, carbon and phosphorus removal, sewage purification,

reclaimed water reuse, sewage deodorization, COD, BOD5 upgrading.





Ⅰ、MBBR media applications:

A. Upgrading and upgrading of sewage projects

B. Sewage treatment MBBR and biological filter process carrier

C. The reclaimed water reuse biochemical treatment of new projects to save investment and land occupation planning

D, Nitrogen removal and phosphorus removal in river treatment

E. Aquaculture: ammonia nitrogen and water quality

F. Biological packing for biological deodorizing tower

Applied industries: municipal, electric power, pharmaceutical, chemical, electroplating, metallurgy, medical, mechanical, papermaking, printing and dyeing, food processing, aquaculture, etc.

Ⅱ、Advantage of KHN MBBR media

Larger surface area and more biological capacity.

High fluidization and mass transfer efficiency.

Add trace elements to scientific formula and quickly film.

Convenient, flexible and efficient.

III、 Distinguish index of MBBR media quality

A. Adhesion of biofilms

Bio-adhesion (most important index) = Protected surface area (related to the design of the packing junction operating state structure) * Bio-adhesion per unit surface area (related to the performance of the packing)

B. Surface properties of MBBR media

Surface construction: it is generally considered that the surface roughness is large and the film speed is fast.

Surface potential: the general microorganism is negatively charged, and the surface of the packing is a positive charge, which is suitable for microorganism growth.

Hydrophilicity: microorganism is hydrophilic particle, filler is hydrophilic and suitable for microorganism growth.

C. hydraulic performance

Porosity: good volume and high porosity.

Shape and size: flow pattern affecting the flow and airflow.

The density of media should be 0.97-1.03, and fluidization can be realized by smaller aeration or agitation.


Ⅳ、The judgement of MBBR film hanging effect

Judgement by the naked eye:

The biofilm evenly distributed on the surface of the carrier, the closer to the surface of the carrier, the more compact, otherwise, the looser, and the darker the color of the carrier, indicating that the carrier has entered a mature stage.

Microscopic examination and judgement:

The structure of biofilm is dense and the species of microorganisms are diversified. The number of immobilized ciliates, bellworms and recalcitrants is large. A few rotifers and swimming ciliates indicate the maturity of biofilm.

Anaerobic membrane

Aerobic membrane

Ⅴ、 Model and specification of MBBR media

Specifications	mm	Φ10×7	Φ11×7	Φ12×9	Φ14.5×10	Φ25×12
Compartments	pcs	5	4	4	10	19
proportion	g/cm3	>1.5	>1.4	>1.2	>1.2	>0.95
Stacked number	Pcs/m3	1038700	1038000	666340	341000	135300
specific surface area	m2/m3	>1000	>900	>800	>800	>500
Voidage	%	>95	>95	>95	>95	>95
Adding rate	%	15～55	15～70	15～57	15～60	15～75
Film hanging time	days	5～15	5～15	5～15	5～15	5～15
Nitrification efficiency	gNH4-N/m3.d	400～1200	400～1200	400～1200	400～1200	400～1200
BOD Oxidation efficiency	gBOD/m3.d	2000～10000	2000～10000	2000～10000	2000～10000	2000～10000
COD Oxidation efficiency	gCOD/m3.d	2000～15000	2000～15000	2000～15000	2000～15000	2000～15000

Service life	years	>10	>10	>10	>10	>10

Ⅵ、The project site

MBBR media in Spain

export to Brazil

MBBR media in Sichuan China

MBBR media in sewage treatment plant

MBBR media without aeration

MBBR media at aeration

MBBR media in USA

MBBR media in middle east

Thanks

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