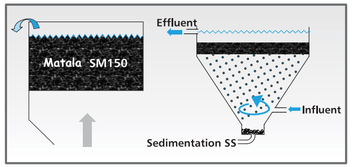
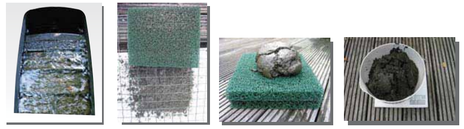
Application of Matala® in sedimentation process

3-Dimensional fiber distribution, easier to capture the SS in the water.

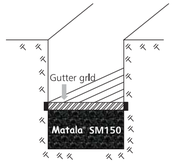


- The fibers of the 3-D **Matala**® filter web attract particles that conglomerate into flock.
- Vast amounts of sludge can be build-up within the media before clogging occurs.
- Short intermittent aeration dislocates flock that can sediment out of the media.



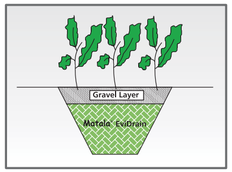
Pictures left shows 0.1m3 of SM-290 can capture the sludge 24.3kg.

Application of Matala® in storm water treatment



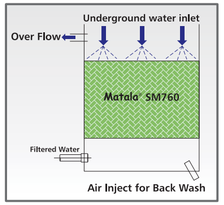
Matala®
can be applied in secondary storm water treatment for reduction of suspended solids.

Application of Matala® in wetland



- High void space: >90%.
- High pressure load: (Envidrain panel 2cm thickness)
  - <30% Compression under pressure of 8920kgf/m^2.
- High water draining capacity.

Application of Matala® in iron removal



On-Site installation
(Underground water Iron Removal)
- Water Pump capacity : 2HP
- Total **Matala**® SM760 used : 1m^3
- Influent iron : 9.2ppm
- Effluent iron : 1.0ppm
- Iron Removal rate : 89%
  (System installed as portable iron removal filter)

SPECIFICATIONS:

Matala® Type Product Code	Color	Specific surface m^2/m^3 (ft^2/ft^3)	Fiber diameter mm (inches)	Free volume%
M150	Black	150 ± 10 , (46 ± 3)	1.9 ± 0.1 , (0.0748)	93
M190 / FM190	Black	190 ± 10 , (58 ± 3)	1.7 ± 0.1 , (0.0669)	92
M290 / FM290	Green	290 ± 10 , (88 ± 3)	0.9 ± 0.1 , (0.0354)	93
M365 / FM365	Blue	365 ± 10 , (111 ± 3)	0.55 ± 0.1 , (0.0217)	94
M460 / FM460	Gray	460 ± 10 , (140 ± 3)	0.45 ± 0.1 , (0.0177)	94
M760	Brown	760 ± 10 , (231 ± 3)	0.3 ± 0.1 , (0.0118)	92

*Product code of "FM" stands for Flex-Matala®.
*The above specificatons are subject to change without prior notice.

IN SHEET:

Matala® Type Product Code	Color	Measurements cm (inches) Matala®	Measurements cm (inches) Flex - Matala®
SM150	Black	120x100x5 , (48x39x1.97)	—
SM190 / FSM190	Black	120x100x5 , (48x39x1.97)	120x100x4.0 , (48x39x1.57)
SM290 / FSM290	Green	120x100x4 , (48x39x1.57)	120x100x3.8 , (48x39x1.5)
SM365 / FSM365	Blue	120x100x4 , (48x39x1.57)	120x100x3.8 , (48x39x1.5)
SM460 / FSM460	Gray	120x100x4 , (48x39x1.57)	120x100x3.8 , (48x39x1.5)
SM760	Brown	120x100x4 , (48x39x1.57)	—

*Product code of "FM" stands for Flex-Matala®.
*The above specificatons are subject to change without prior notice.

IN ROLL:

Matala® Type Product Code	Color	Measurement cm (inches)
RM150	Black	Height : 15-100 , (6-39) Diameter : 43-152 , (17-60)
RM190 / FRM190	Black	
RM290 / FRM290	Green	
RM365 / FRM365	Blue	
RM460 / FRM460	Gray	

*Product code of "FM" stands for Flex-Matala®.
*The above specificatons are subject to change without prior notice.

IN TUBE:

Matala® Type Product Code	Color	Measurement cm (inches) Length: up to 220cm, (86")
TM150	Black	Tube A ID: 4.3 ± 0.5 , OD: 11 ± 0.5 ID: 1.69" ± 0.2" , OD: 4.3" ± 0.2" Tube B ID: 12.6 ± 0.5 , OD: 20 ± 0.5 ID: 4.9" ± 0.2" , OD: 7.9" ± 0.2"
TM190 / FTM190	Black	
TM290 / FTM290	Green	
TM365 / FTM365	Blue	
TM460 / FTM460	Gray	

*Product code of "FM" stands for Flex-Matala®.
*The above specificatons are subject to change without prior notice.

Applications:

- Individual household wastewater treatment.
- Septic tank effluent wastewater treatment.
- Domestic sewage treatment.
- Suburban/farm village water
- Draining/infiltration.
- River purification.
- Storm water treatment.
- Industrial wastewater treatment.
- Live stock farm wastewater treatment.
- Marine habitat rehabilitation.
- Grey water treatment.
- Wetland.
- Gas and fluid contact media.
- Air scrubbing

Matala®
" Make water alive "

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http://www.matala.com.tw
e-mail:info@matala.com.tw

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Matala®

" Make water alive "

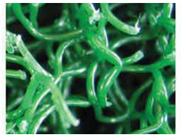
Think Progressive !

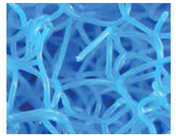
Features & Benefits

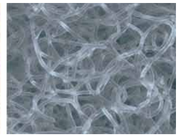
Matala® Filtration Media:

- 3-D fiber web with excellent void space (92% - 98%).
- Available with various specific surface area (120m²/m³ - 760m²/m³).
- Available with various fiber diameters (0.3mm - 1.95mm).

SM150 extra low density.


SM290 medium density.

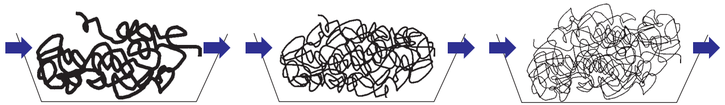

SM365 high density.


SM460 extra high density.

Working Principle

High filtration efficiency, allows for smaller / less filter tanks.

- Gentle Mixing: random fibers create micro turbulence and a 3-D flow.
- Longer Contact: a turbulent flow results in longer and intensive contact.
- Interstitial spaces enhance build-up of the biofilm.



Lower Surface area, such as SM120-190m²/m³.

Medium Surface area, such as SM290m²/m³.

Higher Surface area, such as SM365-460m²/m³.

Choice of types and densities of Matala® are function of your influent water characteristics and target effluent quality.
Progressive depth filtration increases the sludge holding capacity and anticipates clogging.

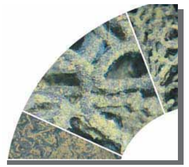
Different shapes (Sheets, Rolls, and Tubes) to fit your existing tanks or space

Application of Matala® in aerobic wastewater treatment

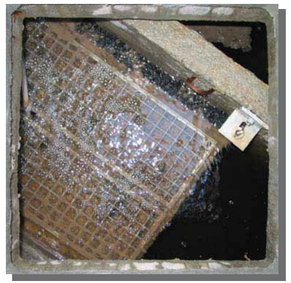
Matala®
" Make water alive "

Adding Matala® in a proper volume ratio to the aerobic chamber will help:

- to stabilize biofilm.
- to reduce the final amount of sludge.
- to build the systems tolerance when influent characteristics and flow rates changes.
- to reach stable effluent quality.



Aerobic Chamber
- BOD load: 1.0 kg/m³/D.
- V(media)/V(tank) ratio: 60%.
- picture: growing biofilm.

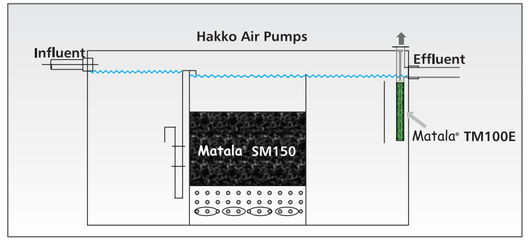


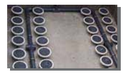
On-Site small aerated wastewater treatment system.
- BOD load: 0.5 kg/m3/D.
- V(media) / V(tank) ratio: 47%.

Submersed Filter Bed in Aeration Chamber.
- Effluent: BOD <6mg/l, COD: 48mg/l, SS: 4mg/l.
  TN: 2.88mg N/l, Ammonia N: 1.47mg N/l.

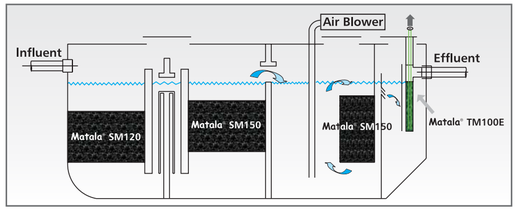
System installed as standard process with CE certificated by european company.

Aerobic Chamber



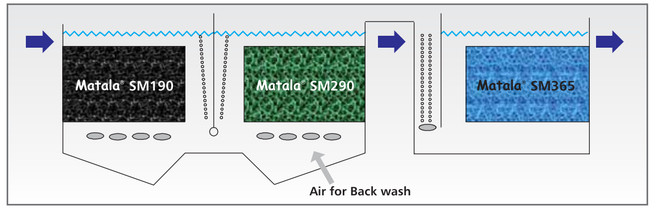


Application of Matala® in combined anaerobic and aerobic household wastewater treatment system



On-Site installation for individual household wastewater treatment system
- V(media)/V(tank) ratio: 40%(for Anaerobic tanks).
  30%(for Aerobic tanks).
- Influent: BOD 200mg/l.
- Effluent: BOD <20mg/l, COD <30mg/l, SS:4mg/l.
  (System installed as popullar standard process in Japan).

Application of Matala® in 2nd treatment and 3rd treatment process



On-Site wastewater treatment installation for Swine farm (10,000 head of swine)
- Volume treated: 100m³/D.
- Primary treatment: active sludge
- Secondary and tertiary treatment:
  fixed submerged **Matala®** bed.
- Type of **Matala®** installed : SM190, SM290, SM365.
- V(media)/V(tank) ratio : 55%.
- Influent : BOD 89.2mg/l, COD:435mg/l.
- Effluent: BOD 51.3mg/l, COD:235mg/l.