



Water & Waste Water Management

Your Sustainable Partner In
Water Treatment



Water & Waste Water Management

Wastewater is any water that requires cleaning after it is used. This includes water that has been used for laundry, bathing, dishwashing, toilets, garbage disposals, and industrial purposes.

Wastewater also includes rainwater that has accumulated pollutants as it runs into oceans, lakes, and rivers. Pollutants are unwanted chemicals or materials that contaminate air, soil, and water.

We have been able to deliver high-performance systems that ensure clean and safe water for various industries, municipalities, and communities. Our commitment to sustainable and scalable solutions has allowed us to continuously meet and exceed the growing demands for effective water management.



500+MLD

Water has been processed using our technology up to this point.

This achievement highlights the reliability and efficiency of our solutions in addressing diverse water treatment challenges.



Applications



Trickling Filters
(Biotowers)



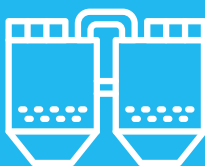
Anaerobic
Digestion



SAFR
reactors



Moving Bed Bio Reactors
(MBBR)



Lamella Clarifier/
Clarifloculator



Water
Stopper

FAB Media/ MBBR Media

FAB/MBBR (Fluidized Aerobic Bioreactor or Moving Bed Bio Reactor) media is a type of wastewater treatment technology that combines principles from both traditional activated sludge and moving bed biofilm reactors.

They can handle varying flow rates and loads, providing stable performance even under fluctuating conditions. MBBR systems can be easily integrated into existing treatment plants for upgrades or expansions, offering flexibility in treatment processes.



Technical Specifications

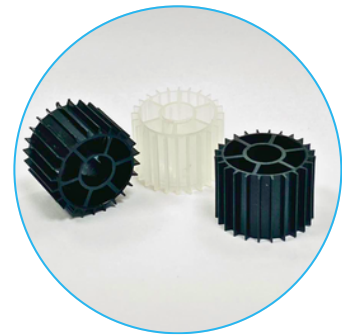
Property	Value
Model No.	BIO-v1622, BIO-r1622, BIO-v2025, BIO-r2025
MOC (Material of Construction)	Polypropylene (PP)
Shape	Cylindrical semi-clog
Total Surface Area***	400 - 600 m ²
Void Ratio	80
PSA/TSA	95%
Density**	0.93 - 0.98 gms/cc

“Our FAB/MBBR media offers high surface area, high PSA/TSA ratio for media as compare to all available existing products in the market.”

HOW DOES MBBR Media Work?

The MBBR process utilizes floating plastic carriers (media) within the aeration tank to increase the amount of microorganisms available to treat the wastewater. The microorganisms consume organic material. The media provides increased surface area for the biological microorganisms to attach to and grow in the aeration tanks. The increased surface area reduces the footprint of the tanks required to treat the wastewater. The media is continuously agitated by bubbles from the aeration system that adds oxygen at the bottom of the first compartment of the aeration tank. The microorganisms consume organic material. When compared to conventional secondary treatment it provides superior efficiency and value.

The MBBR is a complete mix, continuous flow through process which is based on the biofilms principle that combines the benefits of both the activated sludge process and conventional fixed film systems without their disadvantages.



Using moving bed biofilm reactors over other, traditional wastewater treatment processes can be a strategic move for many industries, since MBBR comes with a host of exceptional qualities.

Compact: MBBR is an excellent option for facilities with space constraints, since it typically has a much smaller footprint than other systems. An MBBR aeration tank can effectively treat the same amount of water as a much larger tank used for a more traditional process.

Simple: Another practical advantage of MBBR is that it is a relatively straightforward process. MBBR allows nature to take its course, which minimizes the role of the operator.

Low maintenance: MBBR is also known for being a low-maintenance process. Maintenance tasks like backwashing that an operator would have to perform in other cases are typically unnecessary with MBBR. This system is largely self-moderating, so users can trust it to operate effectively without the need for demanding, ongoing maintenance.

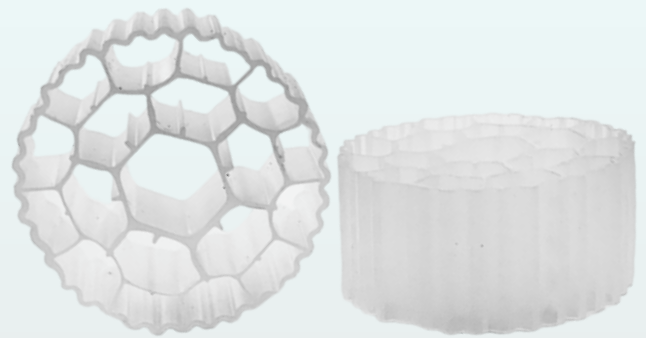
Efficient: One of the most significant advantages of MBBR is its impressive level of efficiency. An MBBR system can work much more quickly than alternative methods to treat the water. The hydraulic retention time (HRT) for BOD and nitrogen removal with an MBBR is around three to four hours. The continuously moving media and the sheer amount of biofilm make this low HRT possible.

K1 Media/ BIO Media

Our bio media is designed to enhance microbial activity, facilitating the effective breakdown and removal of organic pollutants, nitrogen, and phosphorus. This innovative solution ensures regulatory compliance and promotes environmental sustainability.

Bioflow Industries Pvt Ltd is committed to delivering high-quality, innovative wastewater treatment solutions. Our bio media is meticulously engineered to meet the stringent demands of modern wastewater treatment processes.

Bio Media finds application in a wide range of wastewater treatment settings, including industrial and municipal sectors. It can be integrated into existing treatment plants or incorporated into the design of new facilities.



Specifications

Property	Value
Model No.	BIO-V1225
MOC (Material of Construction)	High Density Polyethylene (HDPE)
Shape	Cylindrical semi-clog
Total Surface Area***	400 - 500 m ²
Void Ratio	80
PSA/TSA	95%
Density**	0.93 - 0.98 gms/cc

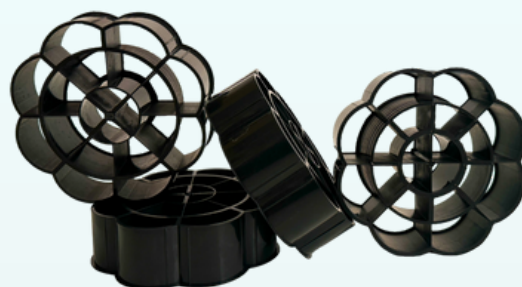
- High surface area maximizes space for microorganism adhesion.
- Optimized structure enhances microbial colonization.
- Supports efficient oxygen transfer for aerobic processes.
- Promotes effective nutrient exchange for microbial growth.
- Made from durable materials for resilience in harsh environments.
- Adaptable for various biological treatment processes (aerobic and anaerobic).
- Reduces maintenance needs with lower fouling rates.

The media's versatility and compatibility with various treatment processes make it a valuable asset for tackling diverse wastewater challenges.

Bio PAC Flower Media

Bio Pac Media is a specially engineered media used in biological wastewater treatment systems. It is designed to provide an optimal environment for microorganisms to flourish and effectively degrade organic pollutants present in wastewater. The media's unique structure allows for a high percentage of protected surface area, ensuring enhanced microbial growth and activity.

Use in a wide range of wastewater treatment settings, including industrial and municipal sectors.



Specifications

Specification	Values
Surface Area	105 m ² /m ³
Dimension	185 mm x 50 mm
Void Ratio	95%
Bulk Density	35.0 kg/m ³
Media Specific Gravity	~0.95 - 0.97
Media Outer Diameter	185 mm



SAFF Media

BIOFLOW SAFF Media (BSM) is an advanced solution for biological wastewater treatment, offering reliable performance in both aerobic and anaerobic digesters.

It has been engineered to improve existing trickling filters by replacing traditional rock media, providing better efficiency in managing sewage and industrial effluents.

Its unique cross-fluted design offers optimal air-water interaction, increasing retention time and improving BOD/COD reduction rates.



BSM 27

Specifications

BSM Model	BSM 27	BSM 53 x 27	BSM 53 x 1
Specific Surface Area	106	86	105
Voidage	>97	>97	>97
Standard Dimensions / Maximum width of Supports	L-1200mm, W-600mm, H-600mm	L-1200mm, W-600mm, H-600mm	L-1200mm, W-600mm, H-600mm
Dry Weight (Approx)	30 kg/m ³	24 kg/m ³	30 kg/m ³
Material	PVC	PVC	PVC
Application	BOD/COD reduction in Trickling Filters, Anaerobic Filters / Digesters	Nitrification, water degasification, Oxygen concentration in Trickling Filters, Scrubbers	BOD/COD reduction in Anaerobic Digesters



BSM 53X27



BSM 53X1



Sugar and Paper industry, with their high water consumption and wastewater generation, find SAFF systems particularly advantageous. SAFF technology can handle the diverse types of wastewater produced by these establishments, including sewage, kitchen effluent, and laundry wastewater along with shock load

Features



Low Operating and Energy Costs

SAFF Media requires minimal energy, reducing costs by up to 40% compared to activated sludge systems.



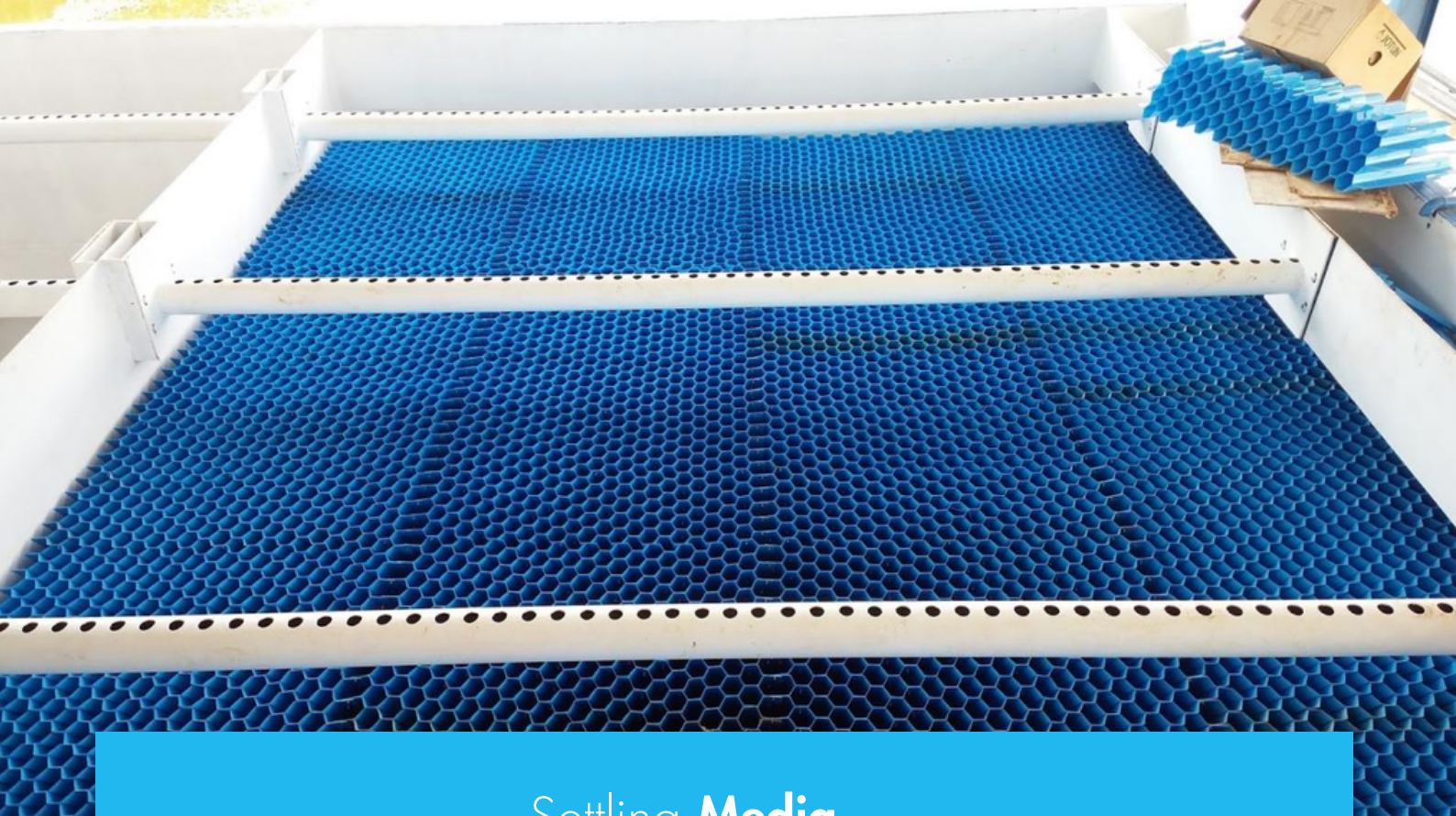
Ease of Installation

Lightweight, self-supporting PVC modules simplify construction, saving time and expenses.



Low Maintenance

The system generates less sludge and requires minimal supervision, with a lifespan of up to 20 years.



Settling Media

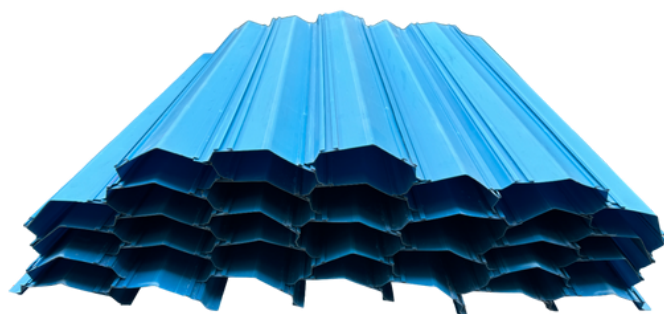
BioFlow Tube Settler systems are rapidly becoming the go-to alternative to traditional sedimentation systems for both the pre and post-treatment of wastewater, as well as for clarifying river water. These systems, capable of managing volumes up to 500 MLD, have been successfully implemented and utilized for nearly two decades. BioFlow provides a comprehensive range of products within the tube settler system lineup.

Hexagonal - Chevron Shaped Tube Settlers (**BTS 120X44**)

BioFlow's BTS -120X44 hexagonal – chevron shaped tube settlers are an exceptional choice for water treatment professionals looking for reliable, efficient, and innovative solutions in sedimentation technology.

With their advanced design and robust construction, these tube settlers are set to redefine standards in water treatment efficiency.

The hexagonal – chevron shaped tube settlers offer advanced solutions for sedimentation and clarification processes, enhancing the efficiency of water treatment facilities.



Specifications

Property	Value
Model No.	BTS-120X44
MOC (Material of Construction)	Virgin PVC, UV Stabilized
Shape	Hexagonal Chevron
Fitting	Tongue and groove
Thickness	1 mm $\pm$ 0.1 mm
Plan Settling Area (at 60 degrees slope)	11 m ² /m ³
Plan Settling Area (at 55 degrees slope)	13 m ² /m ³
Cross Sectional Area	120 mm x 44 mm
Hydraulic Radius	1.5 cm
Maximum Continuous Operating Temperature	55° C
Storage	To be kept away from direct sunlight

Square Shaped Tube Settlers (BTS 50X50)

BioFlow's BTS-50x50 square shaped tube settlers are a cutting-edge solution designed to enhance the sedimentation process in water treatment systems.

These tube settlers are specifically engineered to increase the settling capacity of basins by maximizing the effective settling area within a given volume, thereby improving the efficiency and throughput of water treatment operations.

By incorporating these advanced settlers into your system, you can achieve superior sedimentation performance, improve water quality, and optimize operational costs.



The unique square shape of the BTS-50x50 increases the available surface area for settling, compared to traditional circular clarifier.

Specifications

Property	Value
Model No.	BTS-50x50
MOC (Material of Construction)	Virgin PVC, UV stabilized
Shape	Square
Fitting	Glued modules
Thickness	1 mm $\pm$ 0.1 mm
Plan Settling Area***	5 m ² /m ²
Cross Sectional Area	50 mm x 50 mm
Hydraulic Radius	1.38 cm
Maximum Continuous Operating Temperature	55° C
Storage	To be kept away from direct sunlight

V Shaped Tube Settlers (BTS 66X52)

BioFlow's BTS-66x52 square shaped tube settlers are a cutting-edge solution designed to enhance the sedimentation process in water treatment systems.

These tube settlers are specifically engineered to increase the settling capacity of basins by maximizing the effective settling area within a given volume, thereby improving the efficiency and throughput of water treatment operations.

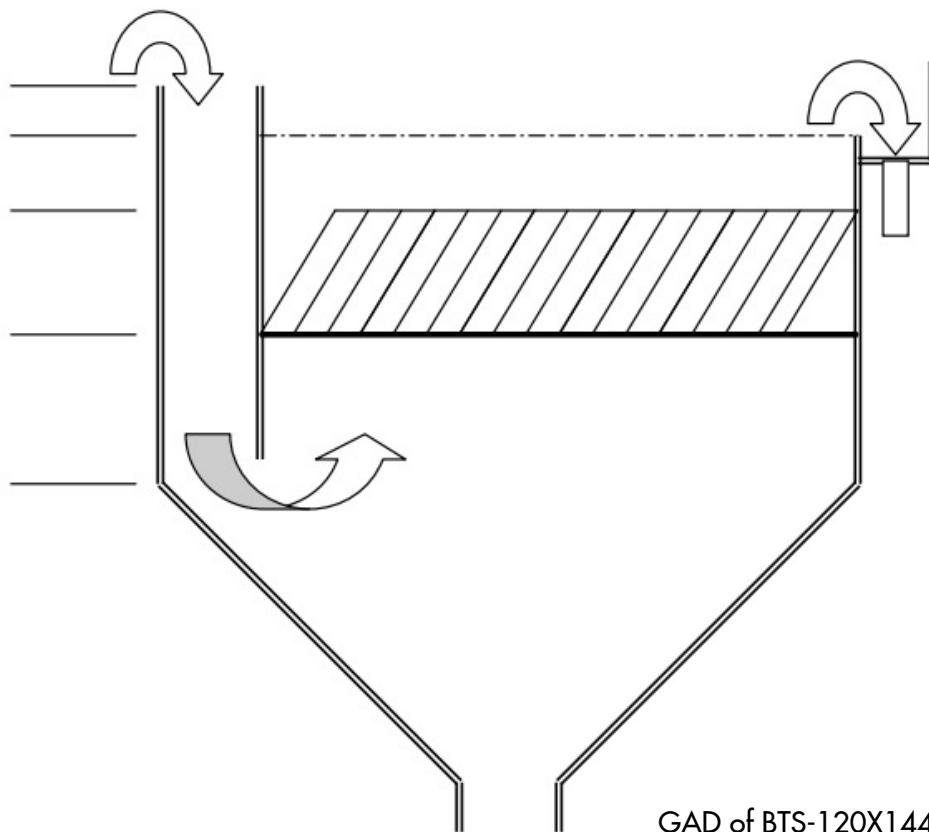
By incorporating these advanced settlers into your system, you can achieve superior sedimentation performance, improve water quality, and optimize operational costs.



The unique square shape of the BTS-66x52 increases the available surface area for settling, compared to traditional circular clarifier.

Specifications

Technical Specification	Mat Code: M5800117084 - TUBE SETTLER MEDIA
Material of Construction	PVC
Shape of Tube	Chevron-Unequal Hexagonal (or as required)
Fitting of Tube	Easy to fit with a tongue and groove arrangement
Plan Settling Area	12 m ² /m ³ (at 60° slope) or 14 m ² /m ³ (at 55° slope)
Pitch	66 x 52 mm (at 60° slope)
No. of tubes per square meter	285 (at 60° slope)
Maximum Continuous working temp.	55°C



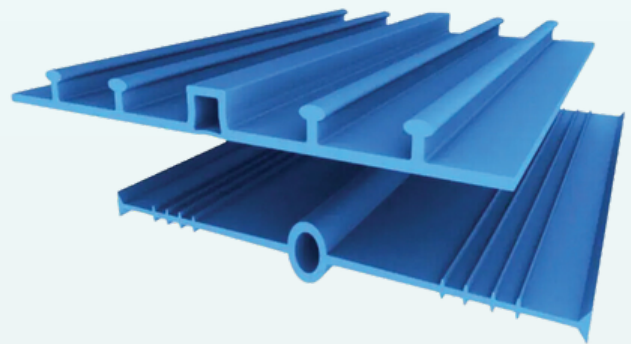
Tube settlers are used in various water and wastewater treatment processes to enhance the settling of particles including Drinking Water Treatment, Wastewater Treatment, Stormwater Management, Industrial Process Water Treatment and Agricultural Runoff Treatment.

PVC Water Stopper

PVC Water Stopper, also called PVC water stopper seal or PVC water stopper belt, is manufactured from superior grade polyvinyl chloride resin and various chemical additives by the process of mixing, granulating and extrusion.

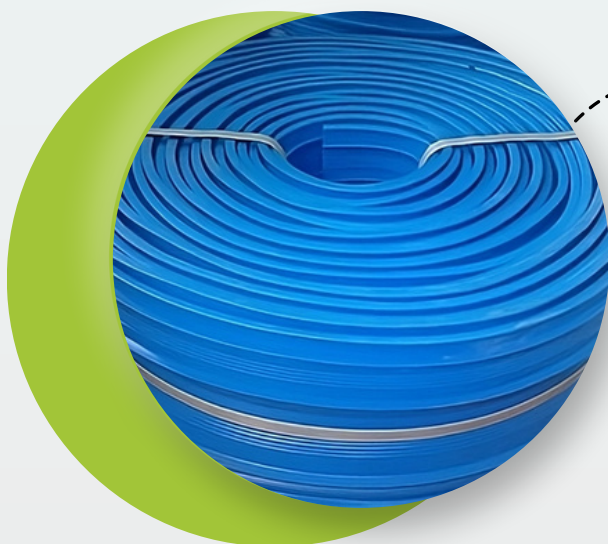
It is used to prevent leakage and permeation in construction joint by taking full advantage of polyvinyl chloride resin property of good elastic deformation. It is highly resistant to corrosion and it has excellent durability.

PVC water stopper are mainly used for tunnels, bridges, storage tanks, water and waste water treatment plants, dams, culverts and other places.



Features

- High flexibility.
- High elasticity and tensile strength
- Low water absorption.
- Resistant to corrosion.
- Unaffected by low temperature and water immersion.
- Bearing high hydrostatic pressure and shocks.
- Resistant to weather and excellent durability.



PVC water stopper are mainly packed in rolls, making transportation more convenient.



Applications

- Storage Tanks
- Retaining Walls
- Swimming Pools
- Subways, Tunnels & Culverts
- Foundation, Basements
- Water & Waste Water Treatment Plants
- Dams, Canals & Water Reservoirs
- Pumping Stations, Underground Chambers Drainage and Sewerage Concrete structures

Type of **Water Stoppers**

1. Ribbed Type– multipurpose water Stopper design, used where the differential settlement of poured concrete is expected and a firm grip in concrete is desired.
2. Dumbbell Type– Greater variation in temperature causes expansion or contraction of joints, Dumbbell type water Stopper is suggested for these sites.
3. Kicker (Surface) Type– these are externally placed and are used where embedded types cannot be used due to the interference of steel reinforcement.

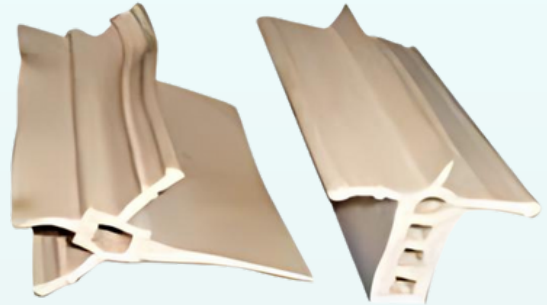
Canal Lining (NCL & NCT)

Canal lining plays a crucial role in preventing water seepage, enhancing the overall efficiency of irrigation systems and water management. Among the various components involved in canal lining.

Bioflow Industries Pvt Ltd is one fastest growing manufacturer and supplier of PVC joint seals, which have emerged as a highly efficient solution.

PVC joint seals are specialized materials used to seal joints and connections in canal lining systems. These seals are designed to provide a watertight barrier, preventing leakage and ensuring the efficient flow of water.

PVC joint seals are made from high-quality polyvinyl chloride (PVC) materials, known for their flexibility, durability, and resistance to environmental factors.



Features

- Supporting as a waterproofing seal at construction joints is crucial for maintaining the integrity of structures, preventing water infiltration that can lead to damage over time.
- Allowing for the independent movement of each section at the joints is essential to protect against the structural movements that occur due to temperature changes, settling, or other environmental factors, ensuring that the integrity of the overall structure is maintained.
- A material that is rigid enough to be placed firmly in position and shape during installation and concrete placements is vital, as it helps to maintain alignment and prevents shifting that could compromise the quality of the construction.



Bioflow Industries adheres also to sector specific standards



An ISO 9001-2015 Company



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