



# bioaset

## Plastic media for trickling filters and anaerobic digesters

### OPERATING PRINCIPLE

**bioaset** structured packing media are made from alternating series of flat and/or corrugated sheets of PVC (see enclosed technical sheet) glued to create a lightweight, strong and stiff structure. These modules are self-bearing and can withstand high loads.

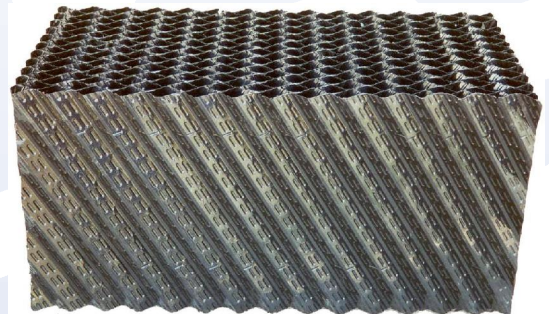
With their careful design, these structures offer a high active surface area for bacteria cultures in a relatively small volume and have free passages large enough to avoid the build-up of abnormal bacteria growth that could clog the filter.

The percolating liquid flows vertically or in cross currents. The liquid is prevented from dripping throughout the module. There are further corrugated sections in the moulded sheets to allow for easy attachment of the biomass and to increase the local turbulence which favours the exchange of oxygen between the air and the sewage.

The thermoformed sheets prevent free fall of the sewage (evenly spread at the top) and also make it easier for the sewage to move along by wetting all the useful surface with a thin even layer.

A flow of air (natural circulation) passes over the sewage, which contains oxygen and organic residues, thus providing the elements needed to develop the bacteria on the surface of the media.

Thanks to their modular structure and relatively low weight, these modules are easy to handle, store and install in towers. They can be supplied as separate unglued sheets for distant destinations and then assembled on site using easily manoeuvrable machinery, also suitable for unskilled workers.

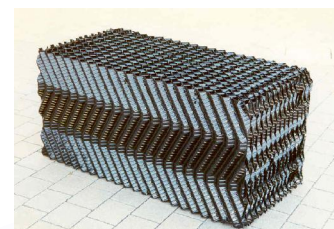
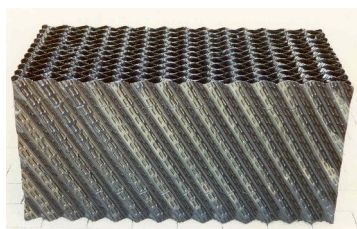


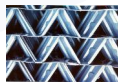
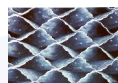

### MAIN ADVANTAGES

- high efficiency
- low energy consumption
- hard to get clogged up
- low capital outlay
- easy installation
- suitable for various loads
- regeneration of existing plant



## TECHNICAL CHARACTERISTICS



model			
	<b>BS 60</b>	<b>BS 27</b>	<b>BS 19</b>
material	PVC	PVC	PVC
length (mm)	1,200	1,200	1,200
width (mm)	600	600	600
height (mm)	600	600	600
flow type	vertical	cross	cross
specific surface area (m <sup>2</sup> /m <sup>3</sup> )	110	140	160
empty space (%)	97	95	94
weight (kg)	20	17.5	16.5
sheet thickness (mm)	1	0.8	0.55

## PVC TECHNICAL SHEET

PROPERTIES	VALUE	UNIT OF MEASUREMENT	METHOD
Density	1.36	g/cm <sup>3</sup>	DIN 53479
Vicat	76±2	°C	DIN 53460
Tensile strength - longitudinal - transverse	≥400 ≥150	KJ/m <sup>2</sup> KJ/m <sup>2</sup>	DIN 53448
Longitudinal tensile tests - yield elongation - ultimate elongation - yield point - ultimate tensile strength	≥4.0 ≥200 ≥45 ≥40	% % Mpa Mpa	DIN 53455
Longitudinal Young module	≥2000	MPa	DIN 53457
Transverse tensile tests - yield elongation - ultimate elongation - yield point - ultimate tensile strength	≥4.0 ≥150 ≥40 ≥35	% % Mpa Mpa	DIN 53455
Longitudinal Young module	≥1900	MPa	DIN 53457