Ref: AQUAVF/**
V2 16/07/2026

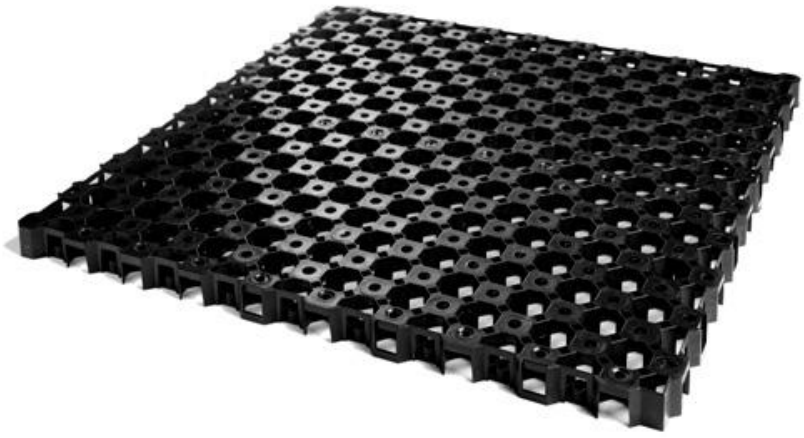
Bitumen Waterproofing
Hot Melt Waterproofing

Technical Data Sheet

AQUAMODUL® VOID FORMERS

Roof Finishes

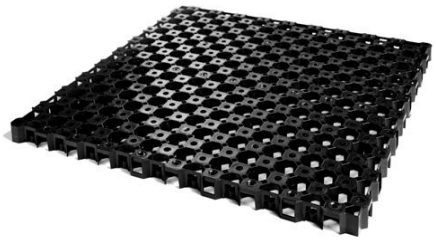
A key part of Axter's sustainable drainage solutions (SuDS), Aquamodul Void Formers are a series of modular, interlocking cells that form part of the Axter Aquamodul blue roof system. These modules provide the attenuation space within the system and are designed for use in a variety of applications.



Aquamodul 25mm and 50mm Void Formers

These geocellular, interlocking modules have been engineered to function as a drainage board specifically for extensive green roofs. The modules structural design, void ratios and loading capabilities provide a solution which captures, retains and conveys rainwater within an urban environment. The system is also able to support and promote the growth of specific, drought tolerant vegetation that require low maintenance (1-3 visits per year). These include sedums, wildflowers, small herbs and / or grasses.

Aquamodul 25mm Void Former



Aquamodul 50mm Void Former

Applications

The Aquamodul 25mm and 50mm Void Formers are designed for use in applications that will not be exposed to traffic loading.

Installation

All calculations are based on site-specific load requirements, construction details, soil cover and ground conditions. The suitability must therefore be approved for each project before installation.

Key Benefits

- Modules are manufactured from 100% recycled polypropylene (PP).
- Interlocking mechanism adds to the systems lateral tensile strength.
- Sufficient strength / void ratio to support extensive roof composition.
- Void ratios that provide appropriate plant aeration.
- Geocellular structure helps retain storm water.

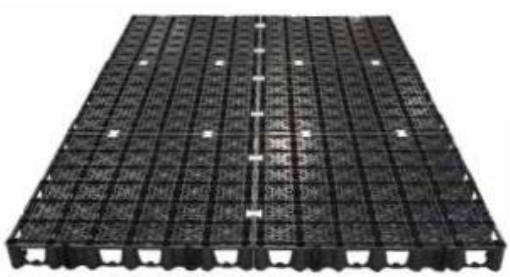
Product specifications			
Characteristics	**Unit**	**Aquamodul 25mm Void Former**	**Aquamodul 50mm Void Former**
Product reference code		AQUAVF/25	AQUAVF/50
Weight per module	**kg**	0.55	1.1
Modules per m²	**Module**	4	4
Length	**mm**	500	500
Width	**mm**	500	500
Depth	**mm**	25	50
Sectional void ratio	**%**	84	95
Compressive strength	**t/m²**	51 (598 kPa)	93 (928 kPa)
Flow rate per module (l/min)	**l/min**	120	155.4
Saturated weight	**kg/m²**	21.5	54

All values stated above are nominal and may vary within manufacturing tolerances.

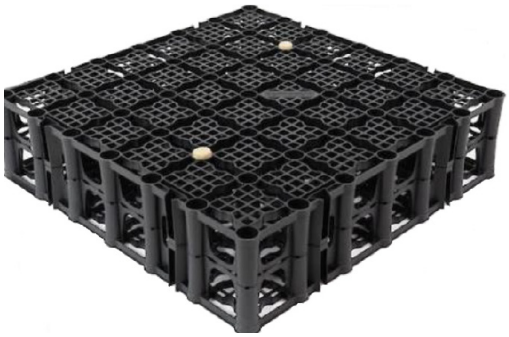
Aquamodul L 85mm and L 170 Void Formers

Are lighter weight void formers designed to provide attenuation for shallow light-weight applications (i.e. not subjected to vehicular traffic loading). Comprising of six pre-connected modules to minimise installation time and manufactured from recycled polypropylene.

Aquamodul L 85mm Void Former



Aquamodul L 170mm Void Former



Applications

Aquamodul L 85mm and L 170 Void Formers are designed for use in applications that will not be exposed to vehicular traffic loading, including green / blue roofs, podium decks*, sports pitches*, permeable paving (sub base & podium)*, attenuation storage tanks*.

*Aquamodul L 170 only.

Installation

All calculations are based on site-specific load requirements, construction details, soil cover and ground conditions. The suitability must therefore be approved for each project before installation.

Key Benefits

- Provides surface water management and makes space for water attenuation in urban environments.
- Shallow, sub-base replacement system.
- 93% void ratio, provides excellent storage capacity.
- Plan area of 3m^2 maximises unit coverage, increasing laying efficiency.
- Manufactured from recycled material.
- Design life is excess of 50 years.

Product specifications			
Characteristics	**Unit**	**Aquamodul L 85mm Void Former**	**Aquamodul L 170mm Void Former**
Product reference code		AQUAVFL/85	AQUAVFL/170
Weight per module	**kg**	12.96	26.04
Length	**mm**	2141	2139
Width	**mm**	1427	1427
Depth	**mm**	85	170
Storage volume (litres per panel)	**l**	242.4	484.81
Volcanic void ration	**%**	93	93
Vertical compressive strength	**kN/m^2**	353 (353 kPa)	380 (380 kPa)

All values stated above are nominal and may vary within manufacturing tolerances.

Aquamodul F 85mm and F 150mm Void Formers

The Aquamodul F 85mm and F 150mm Void Formers have high compressive and tensile strength and bending resistance. The system comprises of single, geocellular, interlocking cells designed for use as stormwater attenuation and / or infiltration system in a variety of applications including blue roofs, green roofs and podium decks which can incorporate vehicular traffic.

The in-built jointing system creates a horizontal 'raft' that is ideal for the shallow attenuation of surface water.

Modules can be joined laterally and combined in layers using the interlocking Aquamodul Connectors and Aquamodul Ties to create secure and consistent rafts and combinations of depth in 85mm and 150mm increments. Details for both products can be found on our technical data sheet 'Aquamodul Ancillary Products'.

Aquamodul F 85mm Void Former

Aquamodul F 150mm Void Former

Installation

All calculations are based on site-specific load requirements, construction details, soil cover and ground conditions. The suitability must therefore be approved for each project before installation.

Key Benefits

- Modules are manufactured from 100% recycled polypropylene (PP).
- Stormwater attenuation and infiltration system.
- Sufficient compressive and tensile strength and bending resistance.
- Used as part of a SuDS scheme to offer stormwater storage.

Performance

The structural load bearing capacity of the Aquamodul F 85mm and F 150mm Void Former modules have been tested in accordance with the following European Standard: BS 7533-13:2009. The system's structural design life expectancy, based upon creep test data (tested in accordance with CIRIA guidelines) is as follows; for lightly loaded areas such as car parks a design life of 50 years is achievable.

Product specifications			
Characteristics	**Unit**	**Aquamodul F 85mm Void Former**	**Aquamodul F 150mm Void Former**
Product reference code		AQUAFF85	AQUAFF/150
Weight per module	**kg**	2.25	3
Weight per m²	**kg**	9	12
Length	**mm**	708	708
Width	**mm**	354	354
Depth	**mm**	85	150
Vertical compressive strength	**kN/m²**	715 (715 kPa)	715 (715 kPa)
Lateral compressive strength	**kN/m²**	156	156
Vertical short-term deflection	**kN/m²**	1mm per 126	1mm per 126
Lateral short-term deflection	**kN/m²**	1mm per 15	1mm per 15
Tensile strength of single joint	**kN/m²**	42.4	42.4
Tensile strength of single joint at (1% secant modulus)	**kN/m²**	18.8	18.8
Tensile strength of bending resistance of module	**kN/m²**	0.71	0.71
Tensile strength of bending resistance of single joint	**kN/m²**	0.16	0.16
Volumetric void ratio	**%**	92	95
Average effective perforated surface area	**%**	52	52
Intrinsic permeability	**k**	Minimum 1.0×10^{-5}	Minimum 1.0×10^{-5}

All values stated above are nominal and may vary within manufacturing tolerances.

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