

# UltimateDrain 40

## WATER RESERVOIR & DRAINAGE BOARD



ArchiGreen Roof Ltd  
3 Patzay Pal Utca • Gyor H-9024  
website: [www.archigreenroof.com](http://www.archigreenroof.com)  
email: [info@archigreenroof.com](mailto:info@archigreenroof.com)  
telephone: + 36 30 149 7667

UltimateDrain 40 is an extremely durable black 40 mm high water reservoir and multi-directional runoff-delay drainage board thermoformed on both sides with outstandingly accurate 2 mm perforations, known as diffusion openings, precisely allocated in the centre of the studs that constitute the top side of the drainage board. It is made of recycled high impact polystyrene (i.e. recycled HIPS).

With water management protocols in mind, UltimateDrain 40 has been designed to mitigate stormwater runoff substantially owing largely to its double-sided structure and the overlying tile pattern in which the boards are installed. Consequently, this decreases the strain on urban sewage systems by multiples. UltimateDrain 40 is CE marked and fully complies with the requirements set forth in the German FLL Guidelines.

## Application area

UltimateDrain 40 is a highly versatile, multi-functional drainage board for virtually any form of green roof landscaping.

Size (L x W x H)	2102 x 980 x 40 mm
Weight	2.257 kg/m <sup>2</sup>
Colour	Black
Material	Recycled HIPS
Retention capacity	
Water	21.26 litres/m <sup>2</sup>
Infilled: crushed brick	23.73 litres/m <sup>2</sup>
Max. compressive strength	
Empty	345 kN/m <sup>2</sup>
Infilled: 4 - 8 mm gravel	> 400 kN/m <sup>2</sup>
Waterflow rate	
i = 0.010 (1 % fall)	0.73 litres/(mxs)
i = 0.020 (2 % fall)	1.06 litres/(mxs)
i = 0.030 (3 % fall)	1.41 litres/(mxs)
Environmental aspect	Fully recyclable

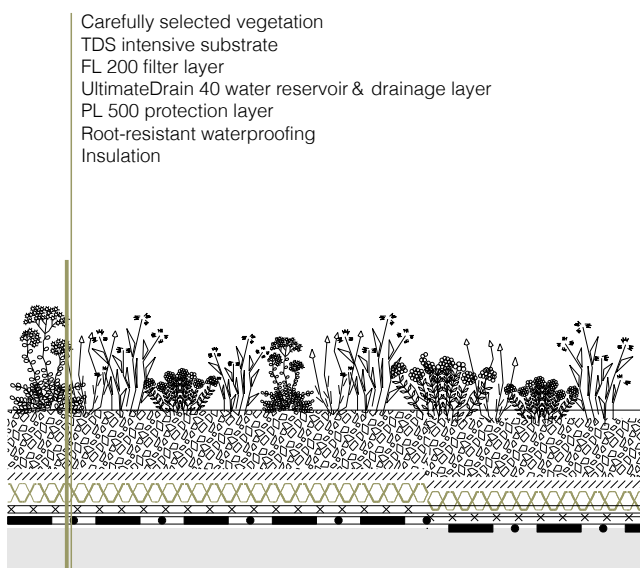
## Features

- UltimateDrain 40 has the following features:
- immense water storage capacity exceeding 21 litres/m<sup>2</sup>
  - attenuation of stormwater runoff
  - outstanding drainage and aeration properties
  - perfectly homogenous 2 mm diameter centralised diffusion openings
  - whilst a layer of UltimateDrain 40 exerts minimal structural load (2.257 kg/m<sup>2</sup>) on the building it does, however withstand a huge compressive strength: on average 345 kN/m<sup>2</sup>
  - when infilled with crushed brick UltimateDrain 40 is able to withstand a compressive strength that exceeds 400 kN/m<sup>2</sup> making it suitable for walkways, paths, terraces and play areas.
  - can be used as shuttering for concrete in the construction of roads and foundations without impeding drainage over the waterproofing membrane.
  - high creep resistance because of being manufactured from HIPS which implies that UltimateDrain 40 boards maintain their geometrical shape over the long-run. As a result, their water retention and drainage properties do not diminish in the long run.
  - strict zero waste guiding principles during production
  - 25 years of functional warranty



**EC Conformity Certificate - EN 13252:2016**  
**1415-CPR-192-(C-52/2020)**  
25-year functionality warranted

## Installation example



## Specification suggestion

ArchiGreen® UltimateDrain 40 is a black double-sided water reservoir and multi-directional drainage board with precise 2 mm diffusion openings in the centre of each of the square-shaped tops of the studs peaking at the top side of the board. The board is 40 mm in thickness and is made of recycled high impact polystyrene. UltimateDrain 40 is a professional green roof water retention and drainage layer recommended for installation on semi-intensive and intensive green roofs. This product is CE-marked. Size: 2102x980x40 mm (LxWxH) [EN ISO 9863-1:2005]. Weight: 2.257 kg/m<sup>2</sup> [EN ISO 9864:2005]. Retention capacity (water): 21.26 litres/m<sup>2</sup>. Retention capacity (crushed brick infill): 23.73 litres/m<sup>2</sup>. Maximum load pressure (empty) at 10 % compression: 345 kN/m<sup>2</sup> [EN ISO 25619-2:2009]. Maximum load pressure (4-8 mm gravel infill) at 10 % compression: > 400 kN/m<sup>2</sup> [EN ISO 25619-2:2009]. Water discharge capacity at i = 0.01 i.e. at roof slope 1%: 0.73 litres/(mxs); i = 0.02 i.e. at roof slope 2%: 1.06 litres/(mxs); i = 0.03 i.e. at roof slope 3%: 1.41 litres/(mxs); and i = 1 i.e. at roof slope 100%: 14.56 litres/(mxs) [EN ISO 12958:2010]. Rate of drainage through perforations under 5 mm permanent water pressure: 0.32 litres/(m<sup>2</sup>xs) [EN ISO 11058:2010]. The performance of the drainage board and the attenuation of stormwater runoff of UltimateDrain 40 exceeds the requirements set forth in German Building Standard DIN 4095, EN 13252:2000/A1:2005, and the German FLL Guidelines. Delivery and installation is in accordance with manufacturer's instructions.

## Packaging unit

UltimateDrain 40 is despatched in boards of size 2102 x 980 x 40 mm (L x W x H) with 218 of these boards being stacked up on a single pallet. Full standard pallets are non-stackable. A standard pallet comprises 450 m<sup>2</sup> of UltimateDrain 40. Standard pallet: 218 boards (2100 x 1000 x 1650 mm, 1055 kg)

## Tools required

For safety purposes a hook cutter is advised when cutting the boards to size. Never cut directly on the waterproofing or the root barrier.