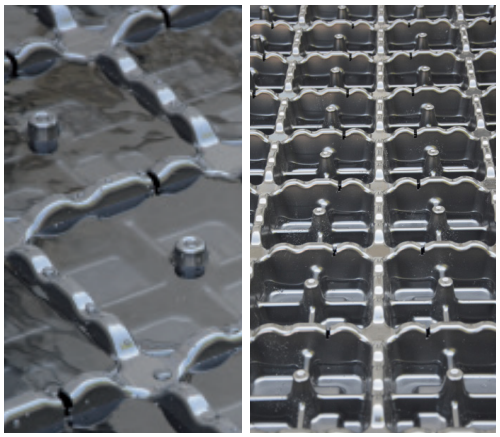
DiaDrain-60H

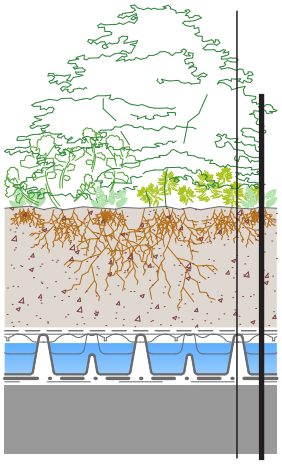
310233

Water-retention and drainage board

ADVANTAGES

- High rain- and irrigation-water retention ⇨ approx. 30,5 l / m² water storage capacity
- Increased contact surface ⇨ heightened protection of the waterproofing through the favorable weight distribution
- Long-term ventillation of the root area ⇨ increased diffusion openings
- Durable and high compressive strength material (HIPS) ⇨ no water cooling needed during summer installations
- Preventing the sinking of the filter layer ⇨ dedicated support cones
- Suitable for flooded blue roof ⇨ Flooding height with approx. 50 mm; with the combination of DiaDrain-60H-UP as a DiaDrain-120 WM watermanagement system up to 100 mm water level





DIADEM® BUILD-UP

- Vegetation
- Growing media
- VLF-200 filter layer
- **DiaDrain-60H** water-retention and drainage board
- VLS-500 water retention and mechanical protection layer
- Root resistant waterproofing membraine
- Roof construction

APPLICATION

Rainwater-retention and flow-delay drainage board for semi-intensive or intesive roof gardens, for green roofs with flooded irrigation system and for paved roofs with sporadical traffic, eg. car parks.

CE EN 13252

100% recyclable

Microbiological resistance EN 12225

SPECIFICATION

Rainwater-retention and flow-delay drainage board with ETA and CE marking, made of recycled high-impact polystyrene (HIPS), 60 mm high, for semi-intensive or intesive roof gardens, and for green roofs with flooded irrigation system up to a water level of approx. 50 mm (even up to approx. 100 mm when used in the DiaDrain-120 WM System), and for paved roofs with sporadical traffic, eg. car parks, when filled and laid with bedding layer above the filter fleece. With overlapping strip around the board, dam grid structure and large water storage cells for an outstanding water retention of 30.45 l / m², with perforations on the upside, and water channel system on the underside for water drainage and vapour diffusion, especially for inverted roofs. Can be used for diffusion- and capillary irrigation. Compressive strength: 122 kN / m² (average); Water flow capacity on 2% roof slope 2.06 l / (mxs) certified according to EN ISO 12958.

Product: DIADEM® DiaDrain-60H
Producer's certificate: A.P.P. Kft.
Website: www.diadem.com

ISO 9001 QUALITY MANAGEMENT 0015

ISO 14001 ENVIRONMENTAL MANAGEMENT 0015

European Technical Assessment ETA ETA-17/1015

Deutsches Institut für Bautechnik DIBt

TECHNICAL DATA

Dimensions (mm):	1940 x 940 x 60 (nominal); 1980 x 940 x 60 (gross)
Surface (m²):	1.82
Water storage capacity (l/m²):	30.45
Fill-up volume (l/m²):	approx. 40
Weight (+/-5%, kg/m²):	2.2
Compressive strength (unfilled, average, kN/m²):	122
Material:	recycled high-impact polystyrene (HIPS)
Water flow capacity DIN EN ISO 12958 (l/(mxs)):	at 2%: 2.06 • at 5%: 3.34 • at 10%: 4.81
Fire classification:	Class E regarding DIN EN 13501-1
Storage:	horizontally, for long-term storage protect from UV radiation
Installation:	adjacent to each other

A.P.P. Kft.
Tel.: +36 96 512 910 • info@diadem.com • www.diadem.com
APP Dachgarten GmbH
Tel.:+49 841 370 9496 • info@diadem.com • www.grundach.com
DIADEM CH AG.
Tel.: +41 79 516 20 62 • info@diadem.com • www.diadem.ch

Green Up the Roof!

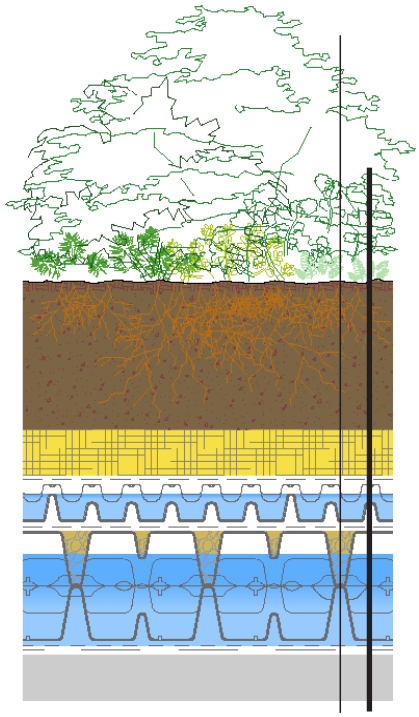
PRODUCT INFORMATION SHEET

DiaDrain-60H

Water-retention and drainage board

310233

DIADEM® APPLICATION EXAMPLE - FLOODED ROOF



- Vegetation
- Growing media
- DiaWool I50 mineral wool
- VLF-150 filter layer
- DiaDrain-40H drainage board (filled)
- VLF-200 filter layer
- DiaDrain-120 WM (DiaDrain-60H + DiaDrain-60H-UP) drainage board (filled)
- VLS-500 water retention and mechanical protection layer
- Root resistant waterproofing membraine
- Roof construction

TEST REPORTS

Test Report No. 1.1/10560/0717.0.2-2017e page 2

kiwa Partner for progress

1. Test process

1.1 Test set-up

From the dimpled sheet to test (DiaDrain-60H) three test specimen (approx. 300 x 300 mm, 4 chambers) were cut and stored for more than 24 h at normal climate (23 °C / 50 % rel. humidity).

1.2 Test process

The test specimen were weighted in dry condition with a laboratory scale (Sartorius Quintix 8102-1CEU) with an accuracy of 0,1 g. Afterwards the specimen were filled with deionized water. It was waited for a complete filling with water, as indicator was chosen the first outflow of water. Now the specimen were weighted again. This procedure was repeated at all 3 test specimen.

Water storage capacity 30,45 l/m²

2. Result

Test and calculation parameters:
Temperature: 20 °C
Density of water (at 20°C) 998 g/l
Area of test specimen: 0,09 m²

Material: KRAITEC top drain plus	Dry weight [g]	Wet weight [g]	Mass of water [g]	watervolume [l]	Water retention capability [l/m²]
Specimen 1	255,3	3007,4	2752,1	2,75	30,56
Specimen 2	245,0	2936,2	2691,2	2,69	29,89
Specimen 3	257,1	3046,0	2788,9	2,78	30,89
Mean value	252,5	2996,5	2744,1	2,74	30,45

Table 1: Results of the water retention capability test

i.V. Dipl.-Ing. (FH) Christoph Staubermann
(Head of test laboratory)

i.V. Matthias
(Deputy head

Test Report No. 1.1 / 10560 / 1157.0.1-2017e

Summary of results

Date / Ref.: : 15 February 2018 / mk

Order by: : APP Kft, Fehervari ut 75, 9028 Gyor, Hungary

Material: : Recycling - Polystroldrainmat (black) DiaDrain - 60 H

Test	Standard	Unit	Mean x	Standard-deviation s	Coef. of variation v in %
Determination of short-term Compressive strength at 1. Peak	DIN EN ISO 29819-2 12.2018	kPa	1316	192	14,6
Compressive strain at 1. Peak		%	21,6	2,9	13,7
Compressive strain at 1 MPa		%	18,3	2,5	13,8

Remark: Test on filled samples (Split 0-4, delivered by customer). Test was stopped due to

Fire classification „E" regarding EN 13501-1

oeti

Report VN749 136006.2
Classification Report

5.2 Classification

Due to the results of the tests carried out, the building product „DiaDrain-60H" can be classified as following.

Classification
E

ÖTI - Institut für Ökologie, Technik und Innovation GmbH | Spengergasse 20, 1050 Vienna, Austria
tel +43 1 5442543-0 | fax +43 1 5442543-10 | email office@oeti.at | FN 326826b | VAT No. ATU65149029
UniCreditBank Austria AG | IBAN AT941200023410378800 | BIC BKAUATWW | EORI ATEOS1000015903
Es gelten ausschließlich unsere Allgemeinen Geschäftsbedingungen | Only our general terms and conditions apply
Member of TESTEX Group

DIADEM® APP Kft.
Tel.: +36 96 512 910 • info@diadem.com • www.diadem.com

PRODUCT INFORM