

# NEXLER NexGreen Duo 10/400

Protective and drainage membrane integrated with a geotextile

## TECHNICAL DATA

PROPERTIES OF DIMPLED MEMBRANE	
Composition	high-density polyethylene (HDPE)
Colour	black
Flat edge	one-sided
Membrane thickness	approx. 0,8 mm
Dimple height	10,0 mm
Profile height	11,1 mm
Number of dimples	approx. 3600 pcs./m <sup>2</sup>
Air volume between the profiles	7,9 l/m <sup>2</sup>
Profile-to-surface contact area	approx. 7174 cm <sup>2</sup> /m <sup>2</sup>
PROPERTIES OF GEOTEXTILE	
Composition	polypropylene (PP) fibres
Colour	white
Thickness	approx. 1,1 mm
Mass per unit area	approx. 110 g/m <sup>2</sup>
Tensile strength	approx. 5,3 kN/m
Elongation under tension	
- longitudinal direction	> 40 %
- transverse direction	> 74 %
Static puncture resistance	approx. 712 kN
Dynamic puncture resistance	31 mm, +6 mm
Characteristic pore size	170 µm, ± 51 µm
Water permeability perpendicular to the product surface	145 l/(m <sup>2</sup> ·s), -43 l/(m <sup>2</sup> ·s)
PROPERTIES OF GEOCOMPOSITE	
Mass per unit area	approx. 910 g/m <sup>2</sup>
Thickness at a pressure of 2 kPa	approx. 9,8 mm
Compressive strength	400 kN/m <sup>2</sup>
Tensile strength	
- longitudinal direction	13,7 kN/m, -3,8 kN/m
- transverse direction	14,9 kN/m, -3,4 kN/m

Elongation at maximum load	
- longitudinal direction	87%, ± 35%
- transverse direction	53%, ± 33%
Temperature resistance	from -40°C to +80°C
Maximum installation depth	10 m
HYDRAULIC PROPERTIES OF GEOCOMPOSITE	
Drainage capacity	i = 0,02, 20 kPa: 0,35 l/(m·s)
OTHER DATA	
Roll width	2,4 m
Roll length	12,5 m
Roll weight	approx. 27,3 kg
Temperature of use	from +5°C to +30°C
Reference document(s)	EN 13252:2016

## PROPERTIES

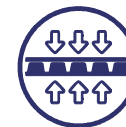
- Effective filtration – the geotextile retains solid particles and prevents siltation of the drainage layer
- Prevents frost heaving
- High compression strength
- Increased mechanical strength and resistance to damage and punctures achieved by calendaring the geotextile
- Flexible, allows easy adaptation to the shape of the roof
- Resistant to weather conditions
- Resistant to plant root overgrowth and decomposition
- Dampens vibrations and oscillations
- Allows the discharge of harmful gases such as radon



EFFECTIVE FILTRATION



INTEGRATED WITH  
GEOTEXTILE



HIGH COMPRESSION  
STRENGTH

## APPLICATION

- Drainage, discharge of excess water and protection of horizontal or vertical waterproofing
- Ventilation and protection of horizontal and vertical thermal insulation
- Green roofs
  - Terraces
  - Car parks
  - Footpaths
  - Motor traffic routes
- For hardened utility surfaces designed for vehicular traffic
  - Access roads
  - Car parks and garages
  - Civil engineering structures
- Protection of vertical elements in underground and civil engineering construction works



FOOTPATHS



MOTOR TRAFFIC ROUTES



PROTECTION

## PACKAGING

### Poland

- Roll: 30 m<sup>2</sup>
- Number of rolls per pallet: 9 pcs.
- Pallet size: 1,1 m x 1,1 m

### Export

- Roll: 30 m<sup>2</sup>
- Number of rolls per pallet: 9 pcs.
- Pallet size: 1,1 m x 1,1 m

## METHOD OF USE

### CONDITIONS OF USE

Works should not be carried out during precipitation.

### SUBSTRATE PREPARATION

The substrate on which **NexGreen Duo 10/400** is laid should be even, clean and free of sharp protruding edges.

### PRODUCT CONTROL

Check the production date on the packaging before use. The product should not be incorporated beyond its shelf life. The membrane must be uniform along its entire length, with no visible mechanical damage, cracks or deformations.

### PRODUCT PREPARATION

**NexGreen Duo 10/400** is a ready-to-use product.

### APPLICATION METHOD

**Green roofs:** Lay the **NexGreen Duo 10/400** membrane on top of the NexGreen Geo 110 or NexGreen Geo Safe 350 geotextile laid on top of thermal insulation or directly on top of waterproofing made of heat-weldable bituminous felt. During installation, it is important

to ensure that the transverse overlaps are not positioned in a single line and that the dimples, together with the geotextile, face upwards. Cut the membrane in appropriate places, fitting precisely to the obstacle encountered (e.g. equipment on the roof, drainage inlets). Before spreading the vegetation substrate or aggregate, it is recommended to weigh down the ends of the membrane so that successive strips do not shift.

Lay **NexGreen Duo 10/400** with particular care, avoid damaging the waterproofing and geotextile layer.

The installation of the membrane should be carried out in accordance with the technical design drawn up for the specific building, in accordance with the applicable standards and regulations. The roof system should be designed with an appropriate pitch (minimum 2%) to prevent water piling up which would adversely affect plant cultivation.

**Protection of vertical waterproofing:** Unroll **NexGreen Duo 10/400** membrane along the vertical edge of the structural element. The membrane should be laid with dimples facing outwards to avoid damage to the waterproofing layer and to ensure adequate water drainage.

**Ventilation and protection of thermal insulation:** Unroll **NexGreen Duo 10/400** membrane along the vertical edge of the structural element. The membrane should be installed with dimples facing the thermal insulation, thus ensuring proper ventilation of the layers.

Adjacent sections should be joined together by overlapping dimples, pressing one row into the other. The minimum overlap width is three dimple rows. To expose the dimple row, peel off and roll upwards a section of geotextile.

During vertical installation use suitable anchoring elements for fixing, i.e. starter strips, dowels, pins. The anchoring elements must be selected according to the layering in such a way that the continuity of the waterproofing layer is not compromised (penetration) during their fixing.

### CONTROL OF PERFORMANCE

When laying **NexGreen Duo 10/400**, ensure that the membrane adheres evenly to the substrate, with no visible indentations. Check that successive layers have not shifted and check overlap widths. Ensure that the membrane is properly cut around details such as inlets, chimneys, eaves, skylights to maintain maximum tightness.

## TOOLS AND TOOL CLEANING

Multi-purpose (segmented) knife, shears, rotary cutter.

## STORAGE AND TRANSPORT

The shelf life of the product is 24 months from production date specified on the packaging. Store in dry rooms. The product must be protected from direct sunlight.

## NOTES

Works should be carried out in accordance with technical conditions, manufacturer's instructions, health and safety standards and regulations.

The remaining content of the product and container should be handed over to authorized companies.

## GENERAL RECOMMENDATIONS

Technical data and information on the method of use are given for a temperature of  $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$  and a relative air humidity of 55%.

Protect the membrane from mechanical damage during further construction work, avoid punctures and tears. Care must be taken to ensure that the substrate is not spread from too great a height, causing mechanical damage, crushing or displacement of the membrane.

**NexGreen Duo 10/400** should be covered with subsequent layers of the structure immediately after it is laid.

## IMPORTANT INFORMATION

Please refer to the detailed conditions of use of the product before use.

We guarantee the quality of our materials as part of our terms of sale and delivery. For buildings with special requirements that are not covered by this manual, we provide our Customers with our own professional advisory service.

The manufacturer has no influence on the improper use of the material, its use for other purposes or under conditions other than those described above. The guarantee only covers the quality of the delivered product. The correct and therefore effective use of the product is not subject to our control.

Neither the manufacturer nor his authorized representative may be held liable for any loss incurred as a result of improper use or storage of the product.

Employees of the company are authorized to provide technical information only and solely in accordance with this Technical Data Sheet. Information other than that contained in this sheet should be confirmed in writing.

If you have any doubts, consult the manufacturer.

Once we have issued a new Technical Data Sheet, this manual is no longer valid.

## CONTACT DETAILS

NEXLER sp. z o.o.

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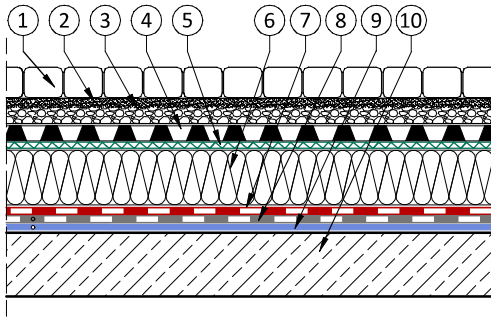
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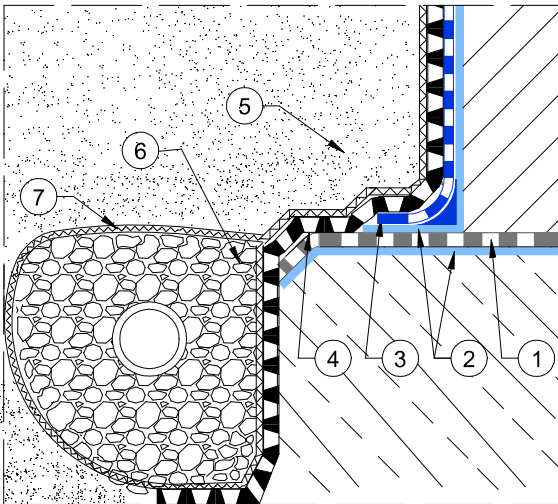
## DETAILS

### Roof for under pavements intended for traffic



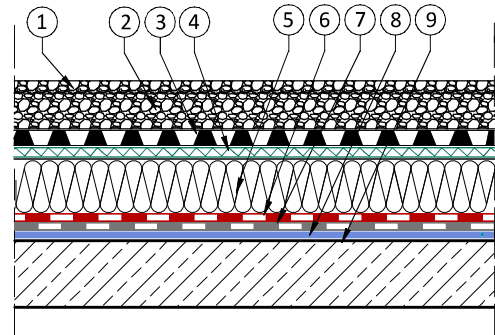
1. Paving block surface
2. Pavement subbase - sand-cement bed
3. Pressure distribution layer
4. Protective and drainage membrane integrated with geotextile  
**NEXLER NexGreen Duo 10/400**
5. Filtration and separation geotextile NEXLER NexGreen Geo 110 or NEXLER NexGreen Safe 350
6. Thermal insulation - XPS boards
7. Weldable underlayer bituminous felt NEXLER PREMIUM PYE PV250 S48
8. Weldable underlayer bituminous felt NEXLER PREMIUM PYE G200 S40
9. Bituminous primer NEXLER BITFLEX Primer or NEXLER Penetrator G7
10. Concrete substrate constructed with a slope of min. 2%

### Foundation with surface drainage - waterproofing



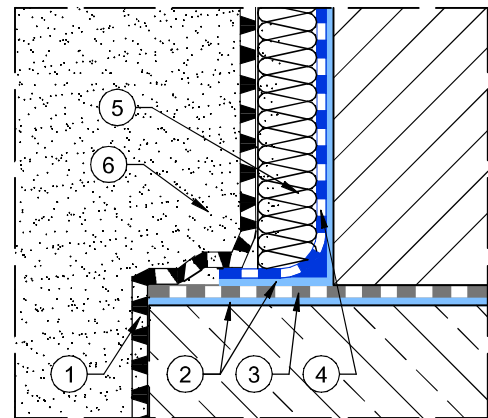
1. Bituminous insulation felt NEXLER Foundation
2. Bituminous primer NEXLER BITFLEX Primer or NEXLER Penetrator G7
3. Waterproofing NEXLER BITFLEX 1KP
4. Protective and drainage membrane integrated with geotextile  
**NEXLER NexGreen Duo 10/400**
5. Soil layer
6. Mineral filling
7. Protection and separation geotextile NEXLER NexGreen Geo Safe 350

### Ballasted roof



1. Ballast layer - min. 50 mm thick
2. Pressure distribution layer - min. 150 mm thick
3. Protective and drainage membrane integrated with geotextile  
**NEXLER NexGreen Duo 10/400**
4. Filtration and separation geotextile NEXLER NexGreen Geo 110
5. Thermal insulation - XPS boards
6. Weldable underlayer bituminous felt NEXLER PREMIUM PYE PV250 S48
7. Weldable underlayer bituminous felt NEXLER PREMIUM PYE G200 S40
8. Bituminous primer NEXLER BITFLEX Primer or NEXLER Penetrator G7
9. Concrete substrate constructed with a slope of min. 2%

### Foundation with thermal insulation - „ventilation” - - waterproofing



1. Protective and drainage membrane integrated with geotextile  
**NEXLER NexGreen Duo 10/400**
2. Bituminous primer NEXLER BITFLEX Primer or NEXLER Penetrator G7
3. Weldable underlayer bituminous felt NEXLER PREMIUM PYE G200 S40
4. Waterproofing NEXLER BITFLEX 1KP
5. Thermal insulation with EPS/XPS boards
6. Soil layer