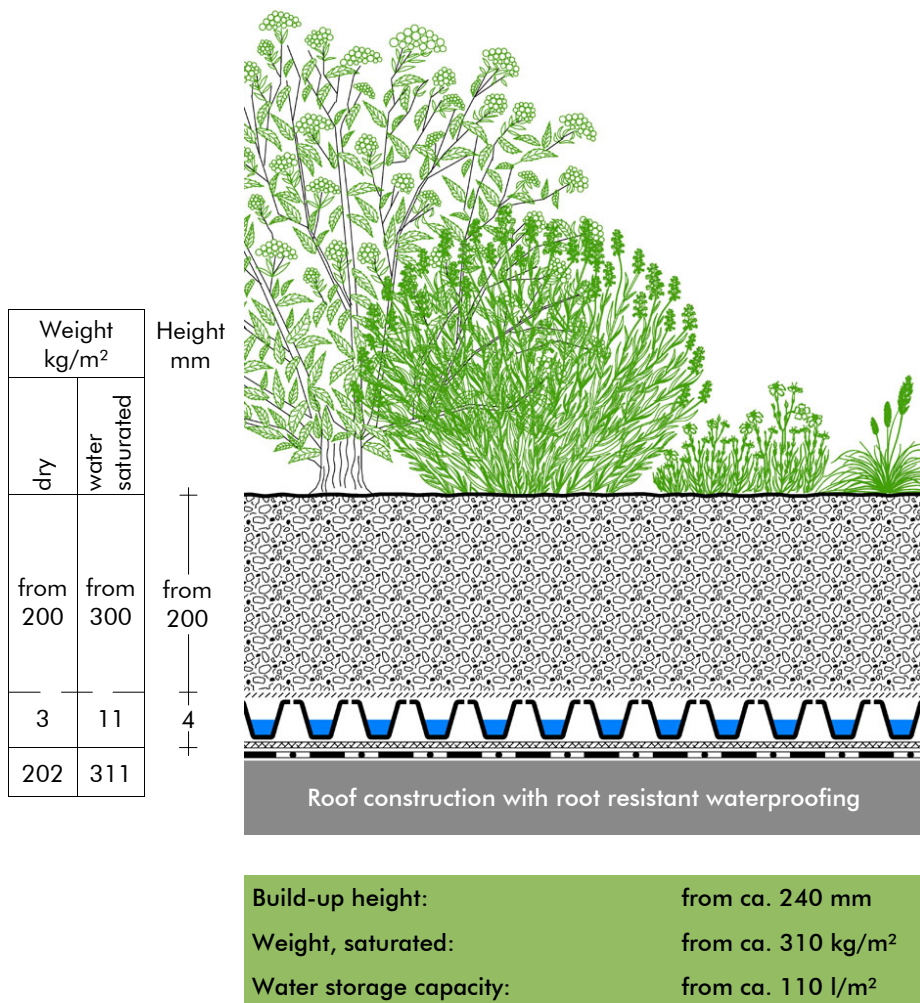


System Data Sheet

"Roof Garden" with Floradrain® FD 40-E



Lawn, perennials, with deeper substrate layers also shrubs and small trees

System Substrate "Roof Garden" resp. System Substrate "Lawn"
(in case of substrate depths > 350 mm in combination with mineral sub-substrate Zincolit® Plus)

Filter Sheet SF
Floradrain® FD 40-E
Protection Mat ISM 50

Note:
If waterproofing is not root resistant the Root Barrier WSB 100-PO is required additionally.

Description

- Multifunctional green roof build-up for lawn, perennials and with deeper substrate layers also shrubs and small trees.
- Applicable on 0°-roofs and on roofs with an inclination of up to approx. 8°.
- Various possibilities of design, also in combination with walkways or terraces.
- Profiled drainage and water storage element made of polyethylene applicable in the field of intensive and extensive green roofs.
- The drainage capacity exceeds the requirements of German Standard DIN 4095.
- Fall protection is to be considered.
- Please note: the build-up described above is suitable for the moderate continental climate of Central Europe. For information on possible adaptations for other climates please contact the ZinCo Technical Department.

Product Data Sheet

Protection Mat ISM 50

Order No. 2050



Synthetic fibre mat, highly resistant to mechanical stress; for use as protection layer under intensive green roofs, walkways and driveways etc.



Technical Data

Protection Mat ISM 50

High-quality fibre mat of polypropylene with needled carrier and rubber backing.

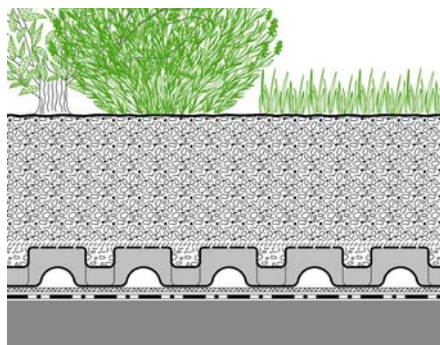
Thickness:	ca. 6 mm
Weight:	ca. 850 g/m ²
Water storage capacity:	ca. 4 l/m ²
Improves footstep sound insulation (with concrete slabs in gravel bedding):	delta L _{w,R} = 25 dB
Penetration force according to EN ISO 12236:	> 4000 N
Strength class:	5
Dimensions:	
Roll width:	ca. 2.00 m
Roll length:	ca. 25.00 m

Features

- highly resistant to mechanical stress
- protection layer meets German Standard DIN 18195, Part 5
- bitumen and polystyrene compatible
- non-rotting
- footstep sound insulation
- water and nutrient storage
- made of recycled fibres
- rubber backing may be used with adhesives

Application Example

"Intensive Green Roof"



Plant layer (e. g. perennials and shrubs)

System Substrate "Roof Garden"

Filter Sheet SF
Floradrain® FD 60, infilled with Zincolit® Plus
Protection Mat ISM 50
Roof construction with root
resistant waterproofing

Specification Suggestion

High quality, non-rotting synthetic fibre mat as water and nutrient storage and mechanical protection layer according to German Standard DIN 18195, Part 5; rubber backing, thickness ca. 6 mm, weight ca. 850 g/m², penetration forces according to Standards EN ISO 12236

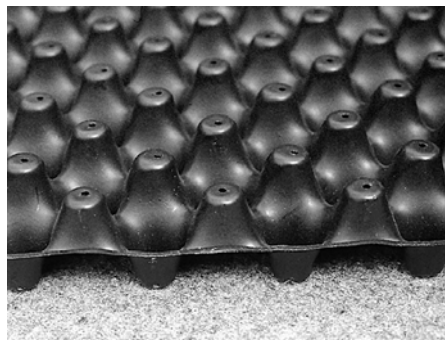
> 4000 N, delivery and installation according to manufacturer's instructions.

Make: ZinCo Protection Mat ISM 50
Enquiries: ZinCo GmbH,
Phone: +49 7022 6003-0

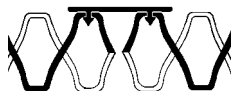
Product Information

Floradrain® FD 40-E

Order No. 3041



Drainage and water storage element of recycled polyethylene for use on extensive and intensive green roofs with or without slope.



Technical Data

Floradrain® FD 40-E

Drainage and water storage element of thermoformed recycled polyethylene.

Material:	PE-HD
Colour:	dark grey
Height:	ca. 40 mm
Weight:	ca. 2.2 kg/m ²
Diffusion opening:	ca. 2 mm
Water storage capacity:	ca. 6 l/m ²
Filling volume:	ca. 17 l/m ²

Compressive strength at 10 % compression

without filling:	ca. 170 kN/m ²
with filling:	ca. 250 kN/m ²

In-plane water flow capacity (EN ISO 12958):

roof slope 1 %:	ca. 1.5 l/(s·m)
roof slope 2 %:	ca. 2.1 l/(s·m)
roof slope 3 %:	ca. 2.6 l/(s·m)

Dimensions:	ca. 1.00 m x 2.00 m
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Accessories:

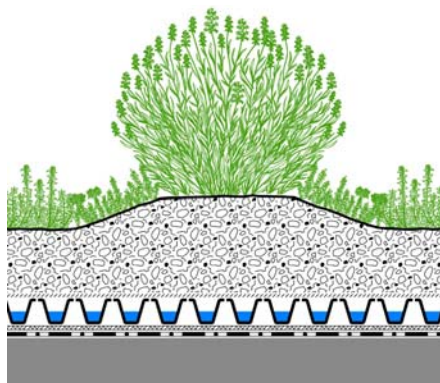
Plastic Connector (to be pressed into diffusion openings)	Order No. 9620
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Features

- universal element for extensive and intensive green roof build-ups
- high drainage capacity
- also suitable for roofs without slope
- water storage even on sloped roof
- walkable
- biologically neutral
- quick and easy installation
- joint connector as accessory available

Application Example

"Semi-intensive Green Roof"



Plant layer "Heather with Lavender"

System Substrate
"Heather with Lavender", ca. 120 l/m²

Filter Sheet SF

Floradrain® FD 40-E

Protection Mat SSM 45

Roof construction with root resistant waterproofing

Specification Suggestion

Drainage and water storage element of polyethylene, height ca. 40 mm, max. compressive strength (without filling) 170 kN/m², with water storage cells and openings for ventilation and evaporation as well as multidirectional drainage channel system on the underside, in-plane

water flow capacity tested according to EN ISO 12958, delivery and installation according to manufacturer's instructions.

Make: ZinCo Floradrain® FD 40-E
Enquiries: ZinCo GmbH,
Phone: +49 7022 6003-0

ZinCo GmbH

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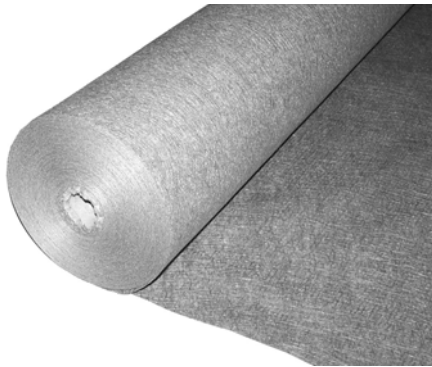
Life on Roofs



Product Data Sheet

Filter Sheet SF

Order No. 2100–2102



Geotextile of thermally strengthened polypropylene, applicable as filter sheet above drainage elements for normal mechanical stress.



0799-CPD-74

Technical Data

Filter Sheet SF

Thermally strengthened filter sheet of Polypropylene.

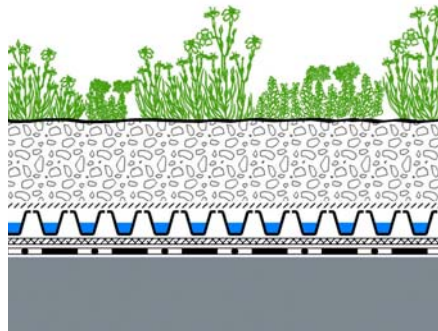
Thickness:	ca. 0.60 mm		
Weight:	ca. 100 g/m ²		
Penetration force according to EN ISO 12236:	ca. 1100 N		
Strength class:	2		
Tensile strength (200 mm) according to EN ISO 10319:	Lengthwise	ca. 7.0 kN/m	
	Crosswise	ca. 7.0 kN/m	
Tensile extension:	ca. 40% / 55 %		
Flow rate (H ₅₀) according to EN ISO 11058:	ca. 70 l/(m ² ·s)	(± 0.07 m/s)	
Effective opening width (O ₉₀) according to EN ISO 12956:	ca. 95 µm		
Dimensions:			
length:	ca. 100.00 m	width: ca. 2.00 m	Order No. 2100
		width: ca. 1.00 m	Order No. 2102
length:	ca. 10.00 m	width: ca. 2.00 m	Order No. 2101

Features

- resistant to mechanical stress
- various application possibilities
- resistant to all naturally occurring acids and alkali
- chemically and biologically neutral
- especially high passage of water
- quick and easy installation
- non-rotting

Application Example

"Extensive Green Roof"



Plant layer "Rockery Type Plants"

System Substrate
"Rockery Type Plants", ca. 80 l/m²

Filter Sheet SF
Floradrain® FD 25-E
Protection Mat SSM 45

Roof construction with root resistant waterproofing

Specification Suggestion

Thermally strengthened sheet of polypropylene; weight ca. 100 g/m², penetration force according to EN ISO 12236: ca. 1100 N, strength class 2, flow rate (H₅₀) according to EN ISO 11058: ca. 70 l/(m²·s), effective opening width (O₉₀) according to EN ISO

12956: ca. 95 µm, delivery and installation according to manufacturer's instructions.

Make: ZinCo Filter Sheet SF
Enquiries: ZinCo GmbH,
Phone: +49 7022 6003-0

Product Data Sheet

System Substrate "Roof Garden"

Order No. 616101 / 616201



System Substrate for intensive landscapes on roofs in multiple layer build-up or on underground car parks.



Technical Data

System Substrate "Roof Garden"

Substrate consisting of Zincolit® Plus (high-quality crushed brick with selected mineral aggregates) and other components, such as sandy soil, enriched with Zincohum® (substrate compost enriched with fibre materials). Particularly suitable for intensive green roofs with demanding perennials. Deeper thicknesses* can support shrubs, bushes and trees. The vegetation can be established by planting plug plants. Intensive roof gardens require irrigation during dry periods. For optimal plant development the use of an appropriate slow release fertilizer (e.g. ZinCo Plantfit® 4 M) is recommended (as shown in a special data sheet).

Available in Big Bags and as loose material in lorries.

Please calculate with a compaction factor of 1.3. That means for every square metre and 10 mm of substrate you order 13 l.

Delivery options

in Big Bags
loose on lorry

Order No.

616101
616201

Features

- high-quality recycled product
- excellent water retention
- high air content – even at max. water capacity
- frost resistant and stable in structure
- pH neutral
- basic component Zincolit® is under constant quality control by the University of Hohenheim



Chemical and Physical Properties

Parameter	Reference Value
Volume weight	
- dry	1000 g/l (+/- 100 g/l)
- at max. water capacity	1500 g/l (+/- 100 g/l)
Maximum water capacity	ca. 50 Vol. %
Water permeability mod. K _f	0.3–30 mm/min
pH value (in CaCl ₂)	6.5–8.0
Salinity (water extract)	< 2.0 g/l
Organic content	< 90 g/l
Compaction factor	ca. 1.3

* At thickness of more than 350 mm please install additional the mineral sub substrate Zincolit® Plus.

Subject to technical alterations and printing errors • First edition 05/2000; Revised 10/2012

ZinCo GmbH

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Life on Roofs

