

JINGO ECO



Bringing Nature Home!

ZINCO GENERAL BACKGROUND



Green Roofing Benefits



**Protection of
Waterproofing**



**Increases
Water
Retention**



Dust Binding



**Noise
Reduction**



**Protection from
Temperature
Extremes**



**Improving
Microclimate**



Amenity Space



**Optimize
Energy
Performance**
(Potential: up
to 19 points)

ZinCo System Build-up



1- Plantation →

Varieties of plants selected according to climate, landscape design, load bearing capacity and desired benefits to building owners and communities.

2- Growing Medium →

Suits the needs of the green roof vegetation and provides for a stable growing environment.

3- Filter Sheet →

Prevents fine particles from being washed out of the substrate soil, thereby ensuring the efficiency of the drainage layer.

4- Drainage Mat →

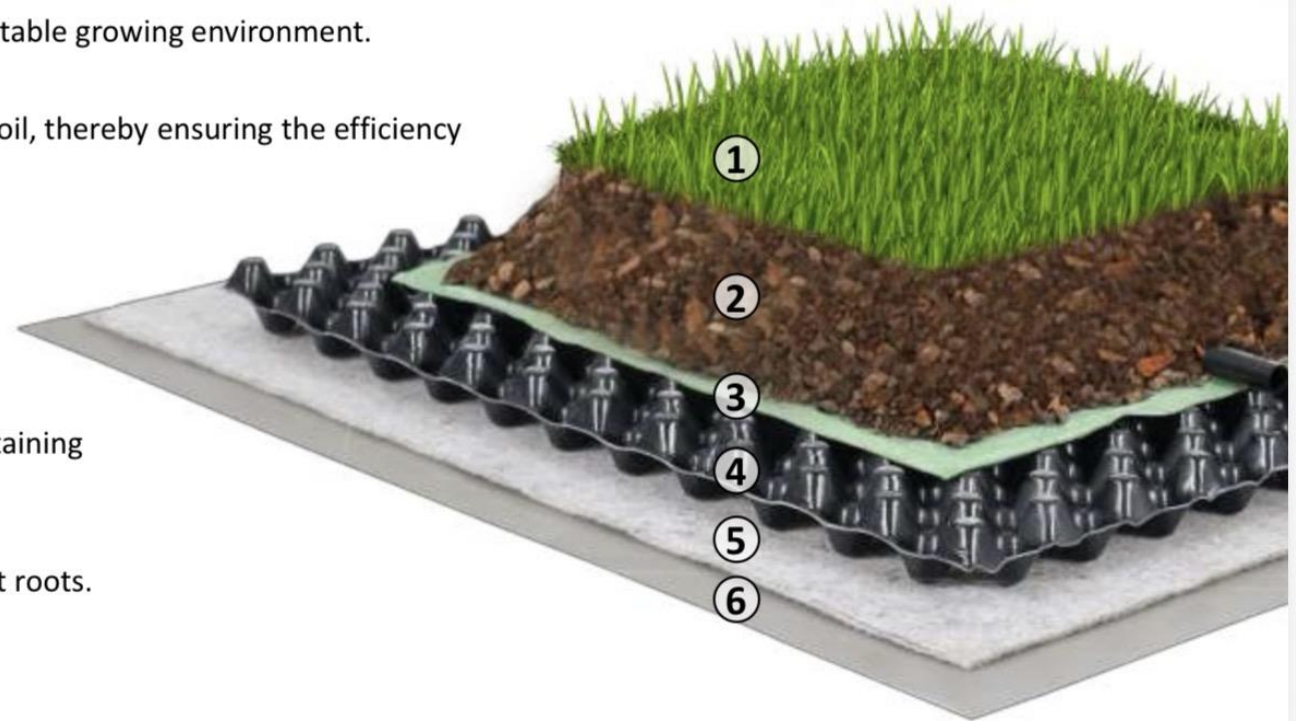
Retains water in troughs on the upper side, while the excess water is safely drained away. Necessary ventilation to the root area is also guaranteed.

5- Protection Mat →

Protects the root barrier from mechanical damage, as well as retaining water and nutrients.

6- Root Barrier →

Protects the waterproofing of the roof from penetration by plant roots.



ZinCo Green Roofs : Endless Options



Extensive Green Roofs



Solar and Green Roofs



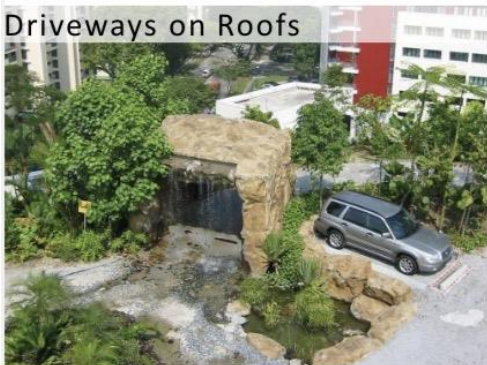
Intensive Green Roofs



Playgrounds on Roofs



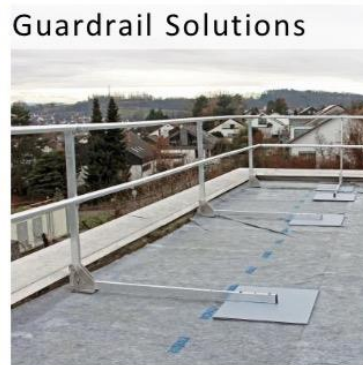
Driveways on Roofs



Pitched Roofs



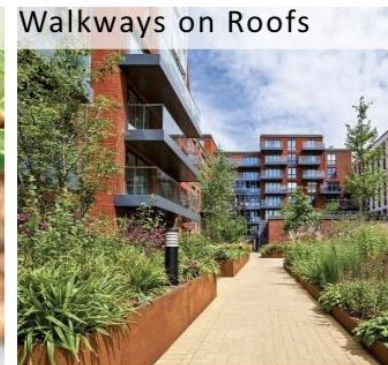
Guardrail Solutions



Safety on Green Roofs



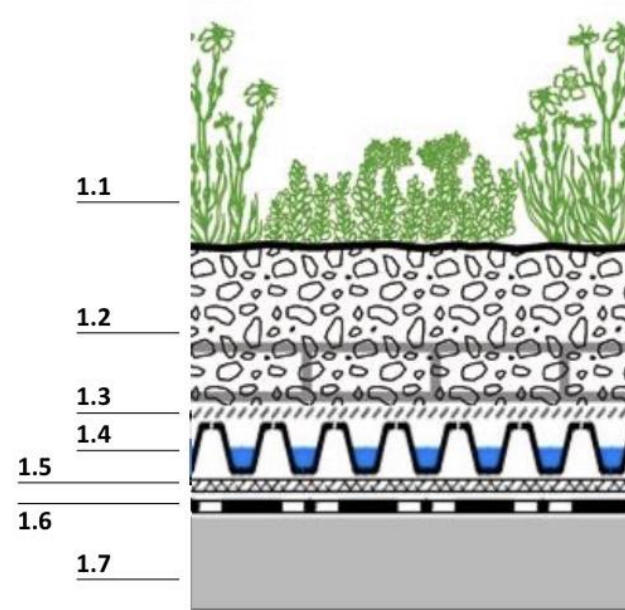
Walkways on Roofs



ZinCo Recommended System Build-up

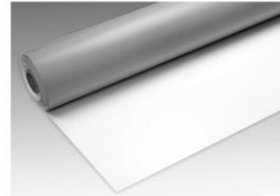
Intensive System

- 1.1. Plantation
- 1.2. Substrate Growing Medium
- 1.3. Filter Sheet **TG**
- 1.4. Drainage Mat **FD40-E**
- 1.5. Protection Mat **ISM50**
- 1.6. Root Barrier **WSB100-PO**
- 1.7. Waterproofed roof slab
(1% slope)

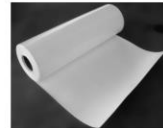


Product Data Sheet

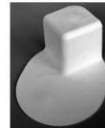
Root Barrier WSB 100-PO



FLL tested sheet, to be hot air welded, applicable as root protection for extensive and especially for intensive green roofs.



Width ca. 2.0 ft. (ca. 0.60 m)



combined
inside/outside
molded corner

Technical Data

EDP No. 21108400

Root Barrier WSB 100-PO

Resistant to bitumen, flexible at low temperatures and excellent weldable sheet made of flexible polyolefin (FPO), with polyester weft-inserted reinforcement, root proof according to the German FLL method of 2002.

Thickness: ca. 0.04 in. (ca. 1.1 mm)
Weight: ca. 0.23 lbs/sq. ft. (ca. 1.1 kg/m²)

Breaking strength
(ASTM D751, Grab method): ca. 337 lbf (ca. 1.500 N)

Tensile strength
(ASTM D751, Grab method): > 20 %

Water vapour permeability of
air layer thickness: $s_d = 280 \text{ m}$

Dimensions:
EDP No. 21108400 ca. 10.0 ft. x 100.0 ft. (ca. 3.00 m x 30.50 m)

Accessories:

EDP No. 11192 (inside/outside corner):

EDP No. 11195 (Unsupported flashing):

- roll size ca. 2.0 ft. x 49.2 ft. (ca. 0.60 m x 15.00 m)
- weight per roll ca. 20 lbs (ca. 9 kg)

Features

- root proof and rhizome proof against couch grasses according to the German FLL method 2002
- not resistant to bamboo
- bitumen resistant and for short periods of time oil-resistant
- resistant to microorganisms
- excellent cold flexibility
- hot air weldable
- superb weather-proofness
- recyclable

Installation Instructions

Install the Root Barrier WSB 100-PO above the non root resistant waterproofing, the seams are to be hot air welded root proof and water proof with an overlap of at least 2 inch. The root barrier has to be taken above the Growing Media along edges and at roof penetrations. Cut the root barrier

in situ at roof penetrations. Consider an allowance for overlap and wastage of ca. 3-5 %. Root Barrier WSB 100-PO is, included, but not limited to, to be installed according to manufacturer's instructions, not exposed to UV-light, completely covered. Call manufacturer for further options.

Health and Safety

This product does not require a material safety data sheet (MSDS) according to the OSHA Hazard Communication Standard (29 CFR 1910.1200). When used as recommended or under ordinary

conditions, it should not present a health and safety hazard. However, an MSDS can be provided as a courtesy in response to a customer request.

Subject to technical alterations and printing errors • First edition 01/2010, Revised 03/2018

ZinCo USA Inc.
401 VFW Drive · Rockland, MA 02370
Phone 866 766 3155 · Fax 866 766 3955
info@zinco-usa.com · www.zinco-usa.com

Life on Roofs



Product Data Sheet

Protection Mat ISM 50



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

Technical Data

EDP No. 2050

Protection Mat ISM 50

High-quality, extremely stable fiber mat of polyester/polypropylene, bottom sided fiber impregnation using acrylic compounds.

Color:	grey mottled	
Thickness:	ca. 0.2 in.	(ca. 6 mm)
Weight:	ca. 0.2 lbs/sq. ft.	(ca. 850 g/m ²)
Water retention capacity:	ca. 0.1 gal/sq. ft.	(ca. 4 l/m ²)

Protection efficiency according to EN ISO 13428:

Residual thickness $\geq$ 40 %

Static puncture:	> 790 lbf	(> 3500 N)
Strength class:	5	

Improves footstep sound insulation (with concrete slabs in gravel bedding):

(delta L_{w,k}=25 dB)

Dimensions:	ca. 6.6 ft. x 82.0 ft.	(ca. 2.00 m x 25.00 m)
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Features

- highly resistant to mechanical strain
- with proven protective effect according to European Standard EN ISO 13428
- bitumen and polystyrene compatible
- non-rotting
- footstep sound insulation
- water and nutrient retention
- made of recycled fibers

Installation Instructions

Install the Protection Mat ISM 50 above a waterproofing or root barrier as with an overlap of 4 inch. The protection mat has to be taken above the Growing Media along edges and at roof penetrations. Cut the protection mat in situ at roof penetrations. Consider an allowance for

overlap and wastage of ca. 10–15 %. Protection Mat ISM 50 is, included, but not limited to, to be installed according to manufacturer's instructions, not exposed to UV-light, completely covered. Call manufacturer for further options.

Health and Safety

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Life on Roofs

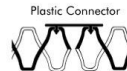


Product Data Sheet

Floradrain® FD 40-E



Drainage and water retention element of recycled polyolefin for use on extensive and semi-intensive green roofs with or without slope.



Plastic Connector

Technical Data

EDP No. 3041

Floradrain® FD 40-E

Drainage and water retention element of thermoformed recycled polyolefin.

Material:	Polyolefin, mainly PE (REC)	
Color:	dark grey	
Height:	ca. 1.6 in.	(ca. 40 mm)
Weight:	ca. 0.4 lbs/sq. ft.	(ca. 1.9 kg/m²)
Diffusion opening:	ca. 0.1 in.	(ca. 2 mm)
Water retention capacity:	ca. 0.12 gal/sq. ft.	(ca. 5 l/m²)
Filling volume:	ca. 0.42 gal/sq. ft.	(ca. 17 l/m²)
Max. compressive strength (at 10 % compression):		
- without filling:	ca. 24.7 psi	(ca. 170 kN/m²)
- with filling	ca. 36.3 psi	(ca. 250 kN/m²)
In-plane Water Flow Rate:		
- roof slope 1 %:	ca. 7.2 gpm/ft.	(ca. 1.5 l/(s·m))
- roof slope 2 %:	ca. 10.1 gpm/ft.	(ca. 2.1 l/(s·m))
- roof slope 3 %:	ca. 12.6 gpm/ft.	(ca. 2.6 l/(s·m))
Dimensions:	ca. 3.3 ft. x 6.6 ft.	(ca. 1.00 m x 2.00 m)

Accessories:

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

Material: POM (Polyoxymethylene)

Features

- universal element for extensive and intensive green roof build-ups
- high drainage capacity
- also suitable for roofs without slope
- water retention even on sloped roofs
- walkable
- biologically neutral
- quick and easy installation
- connectors are also available for a more comfortable installation especially on gentle sloped roofs

Installation Instructions

Install the Drainage Element Floradrain® FD 40-E on the protection mat. The drainage elements are installed butt jointed, in green roof applications with the evaporation holes facing up, for hard landscape applications with the evaporation holes facing down and infilled with well graded coarse sand (3/8 in. to # 100). Cut the drainage element in situ at roof penetrations. Consider an allowance for wastage of ca. 3 %. Floradrain® FD 40-E is, included, but not limited to, to be installed according to manufacturer's instructions, not exposed to UV-light, completely covered. Call manufacturer for further options.

Health and Safety

This product does not require a material safety data sheet (MSDS) according to the OSHA Hazard Communication Standard (29 CFR 1910.1200). When used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, an MSDS can be provided as a courtesy in response to a customer request.

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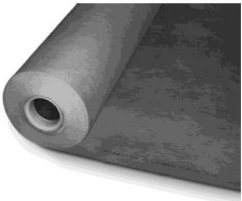
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Life on Roofs



Product Data Sheet

Filter Sheet TG



Thermally strengthened filter sheet of PP, highly resistant to mechanical stress, applicable especially on Stabilodrain® SD 30 and on bulk material.

Technical Data

EDP No. 2192 / 2193

Filter Sheet TG

Thermally strengthened, UV-stabilized filter sheet made of 100 % polypropylene.

Color	grey	
Thickness:	approx. 0.04 in.	(approx. 0.9 mm)
Weight:	approx. 0.04 lbs/sq. ft.	(approx. 175 g/m ²)
Static puncture:	approx. 450 lbf	(approx. 2000 N)
Strength class:	3	
Maximum tensile strength lengthwise/crosswise:	approx. 74 lbs/in.	(approx. 13.0 kN/m)
Flow rate Q under 4 inch (100 mm) water column:	approx. 59 gpm/sq. ft.	(approx. 40 l/(m ² ·s))
Effective opening width, d _{90%} :	approx. 3.2 mil	(approx. 0.08 mm)
Dimensions:		
EDP No. 2192	approx. 6.6 ft. x 328.1 ft.	(approx. 2.00 m x 100.00 m)
EDP No. 2193	approx. 3.3 ft. x 328.1 ft.	(approx. 1.00 m x 100.00 m)

Features

- highly resistant against mechanical stress
- very high tensile strength
- resistant to all naturally occurring acids and alkali
- chemically and biologically neutral
- high passage of water
- quick and easy installation
- non-rotting

Installation Instructions

Install the Filter Sheet TG with an overlap of ca. 8 inch above the drainage element. The filter sheet has to be taken above the Growing Media along edges and at roof penetrations. Cut the filter sheet in situ at roof penetrations. Consider an allowance

for overlap and wastage of ca. 15–25 %. Filter Sheet TG is, included, but not limited to, to be installed according to manufacturer's instructions, not exposed to UV-light, completely covered. Call manufacturer for further options.

Health and Safety

This product does not require a material safety data sheet (MSDS) according to the OSHA Hazard Communication Standard (29 CFR 1910.1200). When used as recommended or under ordinary

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Life on Roofs





General Notes

- All provided quantities are considering total green roof of area = 163.9616 m²
- All provided quantities are considering the planters highlighted on layout only.
- All provided quantities are considering soil depth vary from 0.60 m to 1 m as shown on the layout.
- All provided quantities include overlapping and edging based on depths considered as shown on the layout.
- All ZinCo system build up layers should be laid on smooth surface.
- Roof slab should be waterproofed.
- Each separate planter should have a drainage point.
- Roof slab should be sloped (at least 1%).
- Proposed ZinCo system build up is not for pitched roofs.
- This proposal does not include inspection chambers.
- Any change in the design will affect the calculated quantities.

Contact Us

- Phone: +971 542501940
- WhatsApp: +971 542501940
- Email: JingoEco@outlook.com
- Address: 51 Towers, Business Bay
- Marasi Drive, Office floor 17,1702

