

Authorised Distributor of:



**HOUSING &
DEVELOPMENT
BOARD**



永盛科藝私人有限公司
Eng Seng Tech Pte Ltd



PEG

ROOF TRAY SYSTEM

A HDB Patented Product



*Paving the way
for world class
sustainable cities.*

Award Winning System:

-  HDB Innovation Award (2006)
-  TEC Public Service Innovation Silver Award (2006)
-  IES Prestigious Engineering Achievement Award (2007)
-  Hong Kong Skyrise Greenery Merit Award (2012)
-  SEC – Senoko Energy Green Innovation Award (2013)

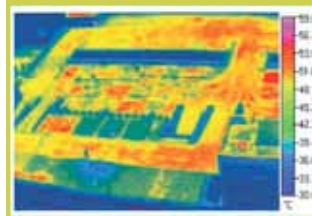
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Self-sustainable and lightweight extensive green roof solution comprising durable trays designed with rainwater storage capability.

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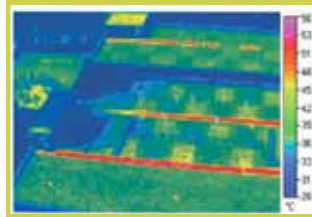
The Urban Heat Island (UHI) effect is becoming an increasing concern in cities across the globe. Rooftop greening mitigates the effect by reducing heat gained on roof surfaces and lowering ambient temperature.

BENEFITS



THERMAL GRAPH BEFORE

Rooftop surface temperatures of 48-55 degree Celcius.



THERMAL GRAPH AFTER
With PEG RoofTray System

Significant reduction of rooftop surface temperatures to 38 - 40 degree Celcius.

- ✓ Mitigates UHI effect
- ✓ Creates “Instant Greening” effect
- ✓ Reduces glare and reflection
- ✓ Improves air quality
- ✓ Aesthetically pleasing
- ✓ Injects nature into city environments

PREFABRICATED EXTENSIVE GREEN ROOF TRAY SYSTEM

The Prefabricated Extensive Green (PEG) Roof Tray System is an innovative modular extensive green roof solution developed by Singapore’s Housing & Development Board (HDB) and distributed by Eng Seng Tech (EST).

With the loss of greenery resulting from urban development, densely-built cities suffer from increased heat gain as well as excessive glare and reflection. The lightweight and portable PEG Roof Tray System adds a protective and thermally insulating layer over roof membranes, reducing heat signatures while increasing energy efficiency. By blending natural greenery with the surrounding urban landscape, the PEG Roof Tray System enables sustainable urban development while providing a comfortable living environment for residents.

ADVANTAGES

Modular & Lightweight

Durable polypropylene trays measuring 500mm x 500mm when filled with 60mm depth of light weight inorganic planting medium. They weigh less than 120kg/m² inclusive of plants, substrate and fully filled water reservoirs.

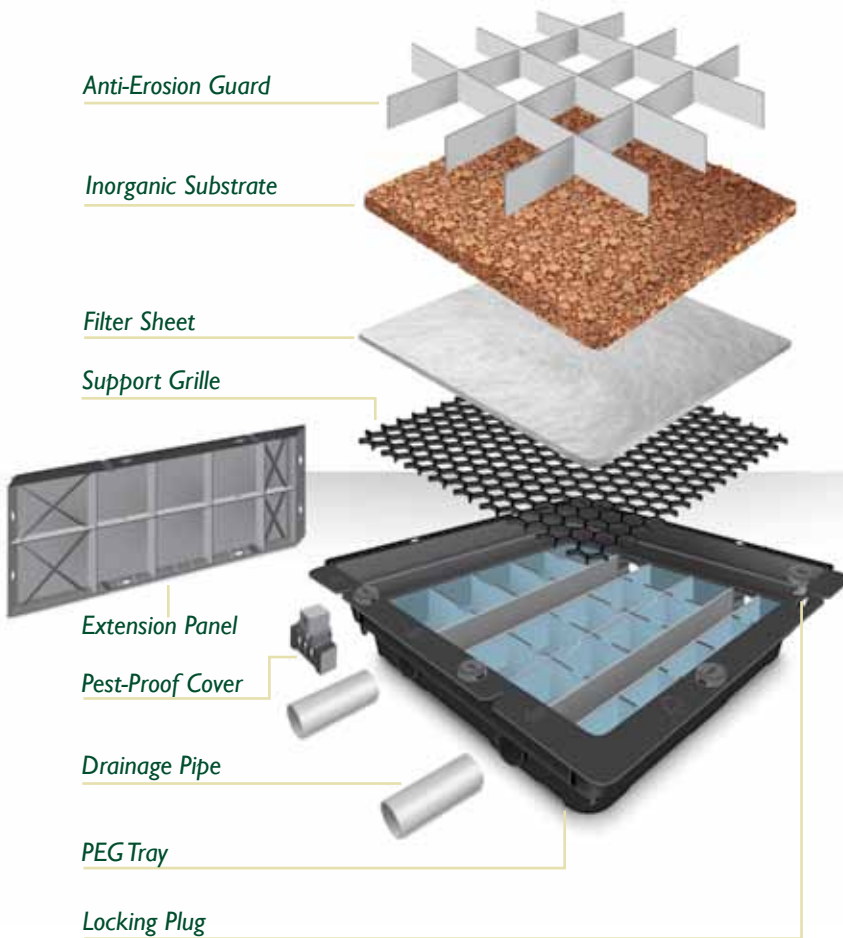
Flexible & Portable

Assembly of the trays form a grid system which enables creation of patterns to enhance aesthetics. It can be easily dismantled, removed and stored to facilitate roof maintenance works.

Self-Sustaining

Store rainwater within its interconnected reservoirs to sustain the plants while excess water is easily discharged through the drainage system; anti-erosion guards prevent substrate from being washed away during heavy downpours.

COMPONENTS



SPECIFICATIONS

TRAY

Dimensions	500 mm x 500 mm x 128 mm
Material	Polypropylene resin with anti-UV additive
Density	min 0.9 g / cm ³
Water Capacity	6 litres / tray
Designed Weight	120 kg/m ² (with maximum water storage, saturated growth medium and plants)

FILTER SHEET

Material	Polypropylene (PP) / Polyethylene (PE)
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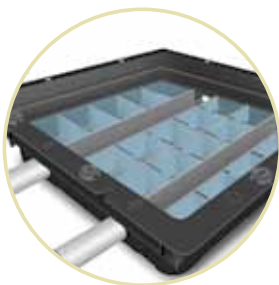
SUPPORT GRILLE

Material	Polypropylene (PP)
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ANTI-EROSION GUARD

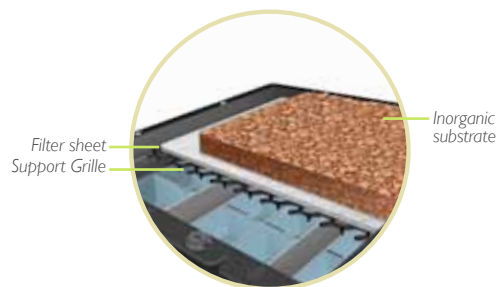
Material	Polypropylene (PP)
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DISTINCT FEATURES



INTERCONNECTING WATER RESERVOIR

Stores rainwater to support plant growth while excess water is discharged through built-in drainage channels.



FILTER SHEET/ SUPPORT GRILLE

Filter sheet prevents substrate particles from entering water reservoir. Support grille holds up the filter sheet and substrate.



ANTI-EROSION GUARD

Prevents substrate from being washed away by surface runoff during downpour.



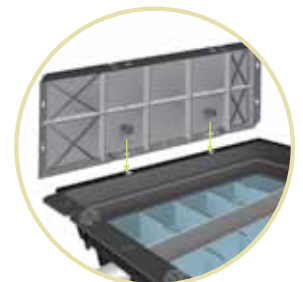
LOCKING PLUGS

Secure trays together to form a modular grid which can be easily removed for dismantling and rearrangement of the trays.



PEST-PROOF COVER

Prevents pests from infiltrating space between the trays.



EXTENSION PANEL

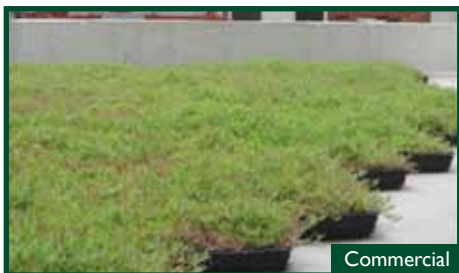
Optional feature to enable up to 300mm of added soil depth.

PEG ROOF TRAY SYSTEM PROJECTS

HDB Developments



Private Developments



Overseas Developments



24 Woodlands Ind. Park E5 Singapore 757801
 +65 6368 7737
www.ensengtech.com.sg
enquire@ensengtech.com.sg

