

Product code: PV04002

The Permaceptor functions as a combined run-off collection, silt/oil interceptor and treatment system. The system is designed to be used with conventional road/yard gullies and ideally laid with zero gradient to prevent the development of lateral velocities. Thus, its initial function is to 'still' sheet run-off from each sub-catchment and to encourage silt deposition. The outlet discharges via a weir and baffle component that separates oils and prevents the effluent and silt from progressing into the rest of the drainage system.



Applications

Permaceptor is used for stormwater collection, interception and the treatment of associated pollutants. The system comprises Permavoid and Permavoid Biomat units located to collect surface water run-off from sub-catchments of predominantly impervious or pervious pavements via Polypipe Ridgully and Midigully. Permaceptor is suitable for use in a range of applications including residential, industrial estates, car parks and basements.

Key Benefits

- Gravity separation of oils and silts at source
- Accidental/catastrophic spills recoverable at source
- Trapped effluent naturally treated by aerobic digestion
- Can enhance the water quality and eliminate the need for end of line petrol/oil interceptors
- The system complies with the regulations of the treatment train criteria in a SuDS scheme as defined in the PPG3
- 100% recyclable
- Units are manufactured from 90% recycled polypropylene (PP)

Performance

The structural load bearing capacity of the Permavoid units have been tested in accordance with the following European Standard: BS 7533-13:2009. The system's structural design life expectancy, based upon creep test data (tested in accordance with CIRIA guidelines) is as follows; for lightly loaded areas such as car parks a design life of 50 years is achievable. For areas with prolonged HGV loading a typical design life may only be 25 years, depending on the design of the pavement surfacing and structural layers over the tank.

Installation

All calculations for Permaceptor units are based upon site-specific load cases, construction types and thickness, soil cover and ground conditions and the suitability must therefore be approved for each project.

Technical Support

Detailed guidance and assistance is available.

For further information, please contact our Technical Team on +44 (0) 1509 615 100 or email civils@polypipe.com or visit www.polypipe.com/civils-technical-hub

ELEMENT	VALUE
PHYSICAL PROPERTIES	
Weight per unit	29kg
Length	1062mm
Width	708mm
Height	300mm
SHORT TERM COMPRESSIVE STRENGTH	
Vertical	715kN/m ²
Lateral	156kN/m ²
SHORT TERM DEFLECTION	
Vertical	1mm per 126kN/m ²
Lateral	1mm per 15kN/m ²
TENSILE STRENGTH	
Of a single joint	42.4kN/m ²
Of a single joint at (1% secant modulus)	18.8kN/m ²
Bending resistance of unit	0.71kN/m
Bending resistance of single joint	0.16kN/m
Volumetric void ratio	92%
Average effective perforated surface area	52%
OTHER PROPERTIES	
Intrinsic permeability (k)	Minimum 1.0 x 10 ⁻⁵
Oil retention	56g/m ²
Effluent discharge at max. oil loading	10ppm
Ancillary	Permavoid Permatie
Material	Polymer concrete

Permaceptor can be utilised in these SuDS techniques

TECHNIQUES													
Blue-Green roofs	Podium Decks	Trees	Sports Pitches	Cycle Paths	Permeable Paving (sub base & podium)	Bioretention & Rain Gardens	Attenuation Storage Tanks	Infiltration	Swales	Filter Drains	Detention Basins	Ponds & Wetlands	Filter Strips
	✓					✓	✓	✓					

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