

# PL 500

## PROTECTION MAT



ArchiGreen Roof Ltd  
3 Patzay Pal Utca • Gyor • H-9024  
Website: [www.archigreenroof.com](http://www.archigreenroof.com)  
E-mail: [info@archigreenroof.com](mailto:info@archigreenroof.com)

PL 500 is a multi-coloured needle punched non-woven geotextile that is thermally reinforced on both sides and weighs 500 g/m<sup>2</sup>. It is made of 100 % recycled synthetic rot-proof material with polypropylene being the dominant component.

The excellent combination of needle puncture and thermal treatment during the manufacturing process results in the PL product range that offer unrivalled CBR puncture and tensile strengths for the protection of the underlying waterproofing and root-resistant layers on a green roof.

The PL range offers outstanding mechanical properties at low weights per unit area thus ensuring maximum performance per unit cost. PL 500 is the ideal choice for guarding the waterproofing under semi-intensive / intensive green roofs with a growing medium depth between 150 mm and 500 mm as advised in the FLL Guidelines.

### Use

Usage of the PL 500 layer include:

- Guarding the waterproofing from physical damage
- Retention of excess water once the growing medium and the drainage boards are saturated
- Gradual release of absorbed water through diffusion

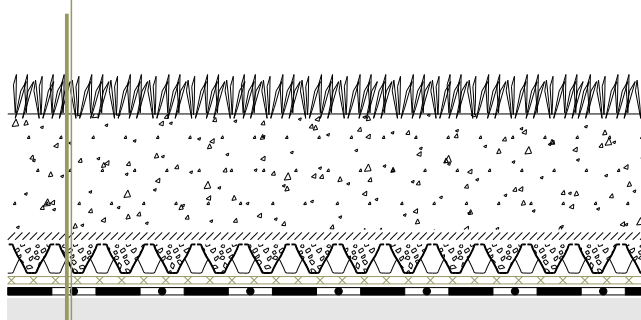
### Application area

PL 500 is primarily used to serve protection purposes in a semi-intensive / intensive build-up, i.e. to guard the root barrier or the root-resistant waterproofing from physical damage. An overlapping of at least 150 mm is required between the adjacent protection mats. Openings must be cut in the protection mat above the roof outlets.

Size (L x W x H )	50 x 2 x Ø0.41 m
Weight	50 kg
Material	Recycled synthetic fibres
Colour	Multi-colour
Robustness class	GRK 3
CBR puncture	2.3 kN
Cone drop test	21 mm
Tensile strength	
Warp (MD)	5.4 kN/m
Weft (CMD)	7.2 kN/m
Elongation at break	
Warp (MD)	85%
Weft (CMD)	75%
Water permeability	
Velocity Index VI <sub>H50</sub>	48 mm/s

### Installation example

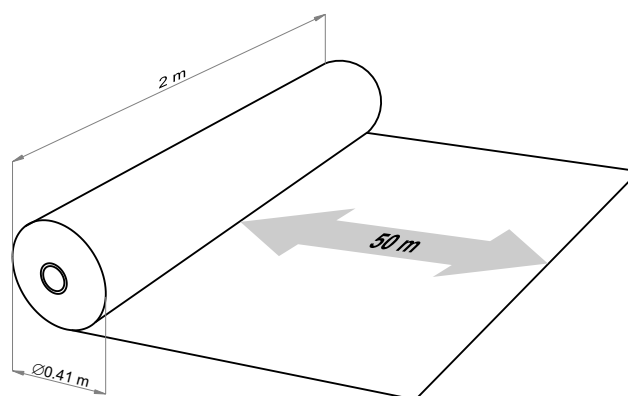
Carefully selected vegetation  
TDS semi-intensive substrate  
FL 200 filter layer  
SedumDrain® 25 water reservoir & drainage layer (infilled)  
PL 500 protection layer  
Root-resistant waterproofing  
Insulation



### Specification suggestion

ArchiGreen® PL 500 is a multi-coloured protection mat made of rot-proof recycled synthetic staple fibres needed to form a mesh that reserves structural stability and durability. It is primarily used to fulfil protection purposes on a semi-intensive / intensive green roof. Size: 50 x 2 x Ø 0.41 m (L x W x H) [EN ISO 9863]. Weight: 50 kg [EN ISO 9864]. Effective pore size: 0.085 mm [EN ISO 12956]. Static puncture i.e. CBR test: 2.3kN [EN ISO 12236]. Dynamic perforation test i.e. cone drop test: 21 mm [EN ISO 13433]. Tensile strength warp (MD): 5.4 kN/m; weft (CMD): 7.2 kN/m [EN ISO 10319]. Elongation at break warp (MD): 85 %; weft (CMD): 75 % [EN ISO 10319]. Water permeability normal to the plane - velocity index VI<sub>H50</sub>: 48 mm/s [EN ISO 11058]. Robustness class: GRK 3. Protection performance of the mat exceeds the requirements set forth in the German FLL Guidelines. Delivery and installation is in accordance with manufacturer's instructions.

### Technical illustration



### Tools required

For safety purposes a hook cutter is advised when cutting the non-wovens. Never cut directly on the waterproofing or the root barrier.

### Packaging unit

PL 500 is despatched in rolls of 2 x Ø0.41 m each with the PL 500 protection mat being rolled on carboard tubes and the whole roll is wrapped in a black polyethylene bag. Weight: 50 kg/roll