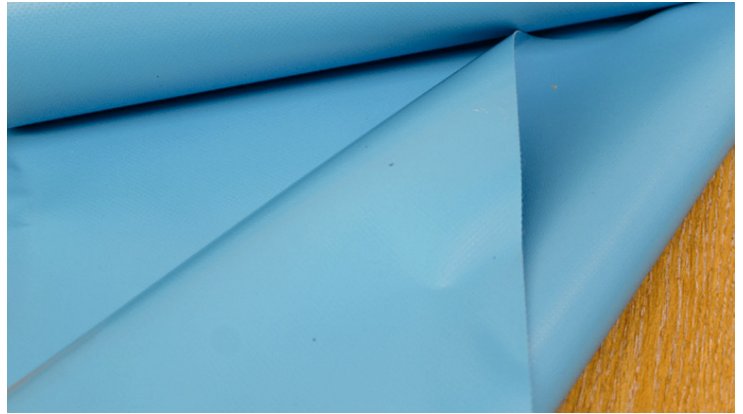


### Shoebox Membrane

Product code: PVSBOX

The Polypipe Shoebox Membrane is used alongside our geocellular Polystorm product range converting them from soak-away solutions to impermeable attenuation tanks.

Supplied by liquid containment specialists Butek™ the synthetic membrane of plasticised PVC features a layer of polyester fabric for dimensional stability. It is also resistant to weathering and ultraviolet rays.



### Key Benefits

- Puncture resistant
- Rotproof
- No dimensional shrinkage
- Adaptable to structural movements
- Remains flexible at low temperatures

### Installation

For full installation guidance and fitment instructions please consult the installation instructions found on our website and delivered alongside the products.

TESTED PROPERTY	TEST METHOD	VALUES (*)
Base Cloth	-	HT Polyester
Coating	-	Flexible PVC both sides
Total Weight	-	900gsm
Tensile Strength	EN ISO 1421	Warp - 4,000 N/50mm, Weft - 4,000 N/50mm
Tear Strength	DIN 53363	Warp - 600N, Weft - 500N
Coating Adhesion	DIN 53357	90 N/50mm
Temperature Resistance	-30 to +70 Deg C	DIN EN ISO 1876-2

WATERPROOFING UNDER PROTECTION	WATERPROOFING UNDER PLOTS & PAVERS	WATERPROOFING UNDER EXTENSIVE GREEN ROOF SYSTEMS	MECHANICALLY FIXED WATERPROOFING	FULLY ADHERED WATERPROOFING	WATERPROOFING FOR DETAILS
●	●				

### Technical Support

For further information, please contact our Technical Team on **+44 (0) 1509 615100** or email [civils@polypipe.com](mailto:civils@polypipe.com) or visit [www.polypipe.com/civils](http://www.polypipe.com/civils)

**Butek Landline**  
Containment Solutions

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### Shoebox Geotextile

#### Key Benefits

Puncture Resistant Geotextile

- Separation
- Filtration
- Protection
- Drainage

#### Applications

Suitable for use in the following applications:

- Roads (EN 13249:2000)
- Railways (EN 13250:2000)
- Foundations & retaining walls (EN 13251:2000)
- Drainage systems (EN 13252:2000)
- Erosion control systems (EN 13253:2000)
- Reservoirs & dams (EN 13254:2000)
- Canals (EN 13255:2000)
- Tunnels & underground structures (EN 13256:2000)
- Solid waste (EN 13257:2000)
- Liquid waste (EN 13265:2000)

MATERIAL PROPERTIES	UNIT	TEST METHOD	TYPICAL VALUES	TOLERANCE
<b>MECHANICAL PROPERTIES</b>				
Tensile strength MD	kN/m	EN ISO 10319	17.80	-2.30
Tensile strength CMD	kN/m		17.80	-2.30
Elongation MD	%	EN ISO 10319	50.00	±11.50
Elongation CMD	%		55.00	±12.70
Static puncture resistance (CBR)	kN	EN ISO 12236	3.10	-0.62
Dynamic perforation resistance - Cone drop	mm	EN ISO 13433	13.00	+3.30
Pyramid puncture	N	EN ISO 14574	275	-55.00
Protection efficiency	%	EN ISO 13719	1.50	-0.30
<b>HYDRAULIC PROPERTIES</b>				
Water permeability normal to the plane	m/s	EN ISO 11058	$80 \times 10^{-3}$	$-24 \times 10^{-3}$
Water flow normal to the plane (*)	l/m <sup>2</sup> /s		80	-24.00
Water flow capacity in the plane @20 kPa	m <sup>2</sup> /s	EN ISO 12958	$7 \times 10^{-6}$	-10% log g
Characteristic opening size (AOS)	µm	EN ISO 12956	70.00	±21.00
<b>PHYSICAL PROPERTIES</b>				
Thickness under 2 kPa (*)	mm	EN ISO 9863-1	2.20	±0.44
Weight (*)	g/m <sup>2</sup>	EN ISO 9864	2.50	±25.00
Composition	100% Polypropylene non-woven geotextile			
Durability	Predicted to be durable for a minimum of 25 years in natural soil with 4<pH<9 and soil temperatures <25°C			



1137-CPD-61511

(\*) Not mandated characteristics for CE marking.

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