



# Nicospan Vertical Bank Protection Specification Sheet



**Nicospan** is a product for vertical bank protection. It can provide a high-quality and very economical form of erosion control. Nicospan is a prefabricated, double weave revetment fabric made from strong UV stabilised monofilament yarns that are heat sealed to form a series of open pockets each having a width of 220mm so that 75mmØ/100mmØ posts can be placed into them.

Nicospan is available in standard widths of 0.5m, 1m and 2m x 100m long rolls, wider widths can also be made to order. Nicospan is easily installed without special equipment. It is especially useful where access to the bank is limited and is the ideal low cost bank protection for use in streams, small watercourses, lakes and ponds.

## Distinctive benefits



- ◀ Standard roll weights - 0.5m approx. 16 kg, 1m approx. 31kg and 2m approx. 62kg
- ◀ Good permeability and soil retention properties
- ◀ Can allow the establishment of vegetation through the fabric and is therefore environmentally desirable
- ◀ UV stabilised and resistant to attack from chemicals and bacteria.
- ◀ Low priced and easily installed by available labour
- ◀ Particularly suitable for use on banks of a vertical nature and for river narrowing

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# Nicospan Vertical Bank Protection Installation Guide

Nicospan is installed on posts driven in at 0.5m to 0.75m centres, dependent on the soil conditions and surcharge. While it is suitable for retaining soil, care should be taken in selecting the appropriate stake type and length.

Timber posts used with Nicospan should be of smooth, machine round softwood and pointed, with a diameter of 75-125mm (max). Posts should be pressure treated to Class 4.

Scaffolding poles can also be used but they must be free of burrs which could tear the fabric. They are more suitable for sites where rocky bed conditions may be encountered. The top of the poles should be sealed with a plastic cap.

The length and spacing of posts will depend on soil conditions, this is not always straight forward but the table below may be used as a guide.



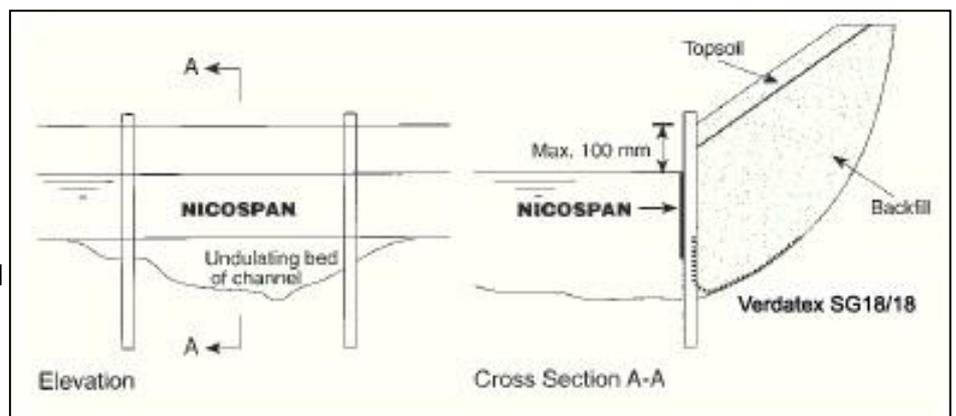
Height of Nicospan	Length of posts req.	Spacing of posts	Diameter of posts
0.5m	1.65m	0.75m	75mm
1m	2.4m	0.50m	75-100mm
2m	3m	0.50m	100-125mm

If the Nicospan does not maintain contact with the undulating bed of the watercourse, then a Verdutex woven geotextile 18/18 woven geosynthetic fabric should be installed vertically behind the Nicospan and then across and up the eroded invert. Suitable backfill material can then be placed to the required level.

## Choice of backfill materials

Fill materials placed behind the Nicospan should have a minimum D50 of 400 µm. When fine soils are present a silt tight filter such as a Verdutex woven geotextile 18/18 should be placed behind and at the base of the Nicospan up to the waterline.

Nicospan is placed over the first anchor post which is then driven in to refusal. A tie back to a second post in the bank or other stable structure may then be made if found necessary. The Nicospan is then unrolled along the eroded length of bank, stretched by 2% and another post is then placed through the Nicospan pocket at the relevant centre and driven in as above. Further posts are then placed at appropriate centres along the Nicospan and driven into place.



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# Nicospan Vertical Bank Protection installation guide continued.....



Vegetation can be encouraged by either sowing grass seed in the soil on top of the bank immediately behind the Nicospan and then covering with our Verdamat Erosion Control Matting or our Pre established Coir Fibre Pallets to increase protection and enhance the appearance of the slope.

The planting of aquatic emergent species should also be considered. These can be spot planted behind the Nicospan or in front of the Nicospan using our Pre established Coir Fibre rolls or Edge Sods.

<b>CONSTRUCTION</b>		<b>STANDARD</b>	
Construction type		woven	
Raw Materials		polyethylene	
<b>MECHANICAL PROPERTIES</b>			
<i>Length direction:</i>			
Tensile strength	kN/m	70	EN-ISO 10319
Elongation at maximum strength	%	28	EN-ISO 10319
<i>Cross direction:</i>			
Tensile strength	kN/m	40	EN-ISO 10319
Elongation at maximum strength	%	22	EN-ISO 10319
<i>Static puncture (CBR):</i>			
Push-through force	kN	6	EN-ISO 12236
<b>HYDRAULIC AND FILTER PROPERTIES</b>			
Water flow at $\Delta h = 100$ mm	litre/m <sup>2</sup> s	500	EN 5167
Opening size O90	micron	760	EN 5168
<b>PHYSICAL PROPERTIES</b>			
Mass per unit area	g/m <sup>2</sup>	265	EN 965
Thickness (2 kN/m <sup>2</sup> pressure)	mm	1.2	EN 964-1

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