



# NICOSPAN

**Nicospan** is a special Ten Cate Nicolon 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 220 mm so that 100 mm (max) diameter posts can be placed into them.

**Nicospan** is available in 100 metre long rolls and standard widths of 0.5 m and 1.0 m.

**Nicospan** is easily installed without special equipment. It is especially useful where access to the bank is limited.

**Nicospan** is the ideal low cost bank protection for use in streams, small watercourses, lakes and ponds.



## DISTINCTIVE BENEFITS

- ✓ **Light weight ( $260 \text{ gr/m}^2$ ); 1 roll of 100 m long and 0.5 m wide weighs approx. 13 kg.**
- ✓ **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**





# NICOSPAN

## INSTALLATION GUIDE

**Nicospan** is installed on posts driven in at 0.5 m to 0.75 m 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, round softwood, machine dressed and pointed, with a diameter of 75-100 mm (max). Posts should be pressure treated to BS 4072. MMG can supply posts treated with Celcure-A to Rentokil specification ST 21 which is not harmful in the water environment and carries a 20 year guarantee.

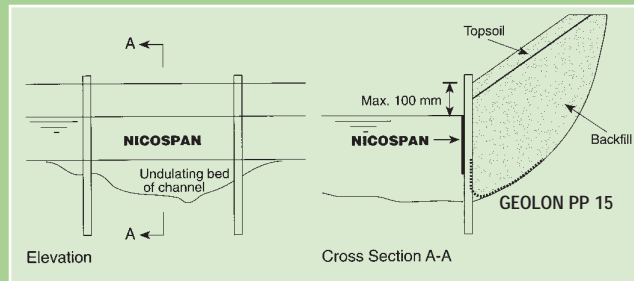


Scaffolding poles can also be used but they must be free of burrs which could tear the fabric. They are more suitable for sites where rocky bed conditions may be encountered.

The 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 required	Spacing of posts	Diameter of posts
0.5 m	1.67 m	0.75 m	75 mm
1.0 m	2.44 m	0.50 m	85-100 mm

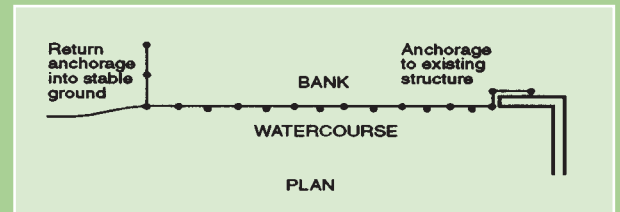
If the **Nicospan** does not maintain contact with the undulating bed of the watercourse, then a Geolon PP 15 woven geosynthetic fabric should be installed vertically behind the **Nicospan** and then across and up the eroded invert. Suitable backfill material can then be placed to the required level.



### CHOICE OF BACKFILL MATERIALS

Fill materials placed behind the **Nicospan** should have a minimum  $D_{50}$  of 400  $\mu$ m. When fine soils are present a silt tight filter such as a Geolon PP 15 should be placed behind 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 should then be made. 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 in. Some posts (no more than 50%) may be placed outside the **Nicospan**. This will encourage invertebrate access.



Vegetation can be encouraged by either sowing grass seed in the soil on top of the bank or the placement of turf immediately behind the **Nicospan**. Enkamat Ecofelt or Bestmann coir pallets can be used on the bank to increase protection and enhance the appearance of the slope or berm. The planting of aquatic emergent species should also be considered. These can be placed behind the **Nicospan** or in the unused pockets which have been held open with post off-cuts or suitable sized stone.

### INSTALLATION TOOL

To ease the positioning of the posts into the pockets MMG recommend and supply an installation tool. This is inserted into a pocket and turned through 90°, thus opening up the pockets so that the post may be more easily slipped in and driven home.

"Dedicated to Soil Engineering"



Ten Cate Nicolon

MMG Civil Engineering Systems Ltd.  
St. Germans, King's Lynn, Norfolk, PE34 3ES England.  
Telephone: 01553 617791 Fax: 01553 617771  
Email: info@mmgces.demon.co.uk

