

## WATERPROOFING BENTONITE MEMBRANES

# BGC GRIP

## COMPOSITE WATERPROOFING MEMBRANE WITH SODIUM BENTONITE

WATERPROOFING BENTONITIC GEOSYNTHETIC CLAY LINER

BGC GRIP is a composite waterproofing membrane based on natural sodium bentonite, designed for active waterproofing of below-grade structures in contact with water, soil, and salts. The bentonite hydrates and swells to form a self-sealing, impermeable barrier, capable of sealing any discontinuities in the concrete.

### MAIN ADVANTAGES



#### SIMPLE INSTALLATION

Easy installation



#### NATURAL SODIUM BENTONITE

Natural sodium bentonite



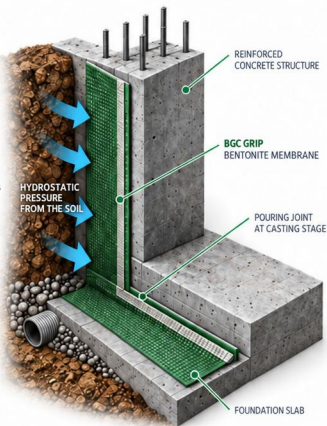
#### BELOW-GRADE WATERPROOFING

Below-grade waterproofing

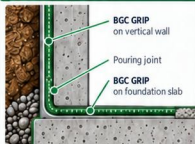


#### SELF-SEALING SYSTEM

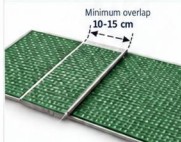
Self-sealing barrier



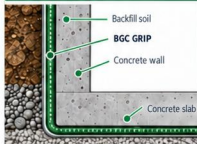
### WALL - SLAB DETAIL



### OVERLAPS BETWEEN SHEETS



### TYPICAL SECTION



#### Bentonite

5,1 kg/m<sup>2</sup> approx.



#### Sheet size

1,2 x 5 m / 2,5 x 20 m



#### Dry thickness

6,5 mm



#### Hydraulic conductivity

$\leq 5 \times 10^{-11}$  m/s



### CE MARKING BY PROBAR

Harmonized standard: EN 13491:2004 / A1:2006

Certificate/CPR: 1982-CPR-538

Notified Body No. 1982 – ABICert S.a.s.

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## STRUCTURE, PERFORMANCE AND INSTALLATION

### GEOCOMPOSITE COMPOSITION

Non-woven PP geotextile - 220 g/m<sup>2</sup>

Sodium bentonite granulate - 5,0 kg/m<sup>2</sup> (approx.)

Woven PP geotextile - 115 g/m<sup>2</sup>

The bentonite layer is continuous and uniform; the porosity of the geotextiles promotes the correct hydration of the water-expansive material.

### FIELDS OF APPLICATION

Waterproofing of buried structures in general, also in the presence of high groundwater levels. Water containment tanks, water conveyance channels and landfills.

### SUPPORTS AND PREPARATION

Concrete supports or compacted natural clayey ground must be free of protrusions, cavities, gravel nests, through holes and discontinuities. Irregularities must be smoothed with an anti-shrink mortar or prepared with a bentonite-based mortar. The support must be compact.

### INSTALLATION PROCEDURE

- 1 Lay the darker polypropylene side facing the support and fix using nailing with washers.
- 2 On vertical walls, proceed from bottom to top, providing a fillet of mortar at wall-to-slab junctions.
- 3 Overlap the sheets by at least 10 cm; on natural supports such as battens or channels, adopt overlaps of at least 20 cm.
- 4 Take care of corners, manholes, steps, reinforcement bars and geometric discontinuities.
- 5 If installation is not immediately backfilled, temporarily protect the sheets from prolonged exposure to precipitation.

# BGC GRIP

## TECHNICAL SPECIFICATIONS

|                               |                            |               |
|-------------------------------|----------------------------|---------------|
| Longitudinal tensile strength | 11 kN/m                    | EN ISO 10319  |
| Transverse tensile strength   | 9,5 kN/m                   | EN ISO 10319  |
| Fluid loss                    | 13 ml                      | ASTM D 5891   |
| Elongation at break           | 18,6 %                     | ASTM D 6768   |
| Swelling index                | 21 ml/2g                   | EN ISO 13438  |
| Peel strength                 | 662 N/m                    | ASTM D 6496   |
| Dry thickness                 | 6,5 mm                     | EN ISO 9663-1 |
| Bentonite areal mass          | 5,1 kg/m <sup>2</sup>      | ASTM D 5993   |
| Permeability coefficient      | $4,55 \times 10^{-11}$ m/s | ASTM D 5887   |

## CONSUMPTION, SIZES AND STORAGE

Indicative consumption: 1.1 m<sup>2</sup> of BGC GRIP per each m<sup>2</sup> of surface to be lined, considering a minimum overlap of 10 cm.

Formats: BGC GRIP 120 = 1.20 x 5 m (6 m<sup>2</sup>), approximately 32 kg/roll. BGC GRIP 250 = 2.50 x 20 m (50 m<sup>2</sup>), approximately 270 kg/roll.

Store in the original packaging in a cool, dry area, protected from moisture and direct sunlight. This data sheet indicates storage between +5°C and +35°C.

## SPECIFICATION TEXT - SUMMARY

Supply and installation of a bentonitic geocomposite consisting of a woven and non-woven geotextile containing sodium bentonite in a quantity of at least 5.0 kg/m<sup>2</sup>, type BGC GRIP by PROBAR ITALIA Srl, installed with a minimum 10 cm overlap and mechanical fastening. At joints and discontinuities, provide reinforcement with granular bentonite and ensure proper continuity with horizontal waterproofing.

## WARNINGS

The technical data refer to the information available in Probar documentation and laboratory tests. Performance may vary depending on actual installation conditions. Product for professional use. Always check the most recent version of the technical documentation and safety data sheet before use.

