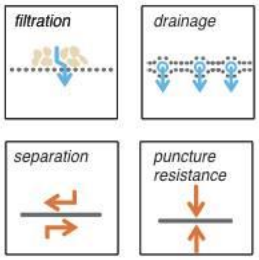
teracro®

the embankment coverings specialist

a cellular nonwoven geocontainer erosion control system with filtering barriers

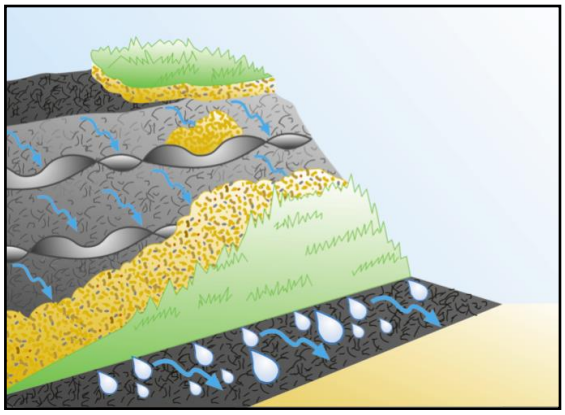
The filtering barrier geotextile teracro® is a geosynthetic product designed to stabilize embankment coverings and help control erosion. It provides an overall solution replacing several other products.



teracro® is used to:

- stabilize earth coverings on slopes to be revegetated,
- stabilize gravel coverings without vegetation,
- stabilize small breakwater rockfills,
- stabilize drainage blanket coverings,
- protect all geomembrane barrier embankments,

for reservoirs and storage coverings.



Detailed description

teracro® is a cellular non-woven geocontainer structure having a tough filtering base, with a filtration opening of less than 200 µm, on which are bonded twisted strips forming permeable upstands 13 cm high, spaced regularly every 60 cm in both directions. teracro® is reinforced by polyester cables to give it the necessary strength on major slopes, and by a network of 20 mm perforated mini-drains spaced regularly to provide it with a high drainage and flow capacity (teracro TD®).

Advantages

- teracro® is a complete, prefabricated ready-to-use system,
- teracro® combines several functions and advantageously replaces several products:
  - very easy and very quick installation,
  - ready-to-use,
  - economical.
- teracro® with a needle-punched nonwoven base, has all the hydraulic and mechanical properties to protect earth slopes or geomembrane barrier embankments,
- an entirely filtering structure, that can be used to protect the supporting soil from internal and external erosion,
- a puncture resistance capacity with regard to geomembrane liners,
- a tensile strength capacity to resist forces,
- a structure with filtering upstands to prevent the formation of gullies,
- a needle-punched non-woven structure favouring the retention of capillary moisture to promote vegetation,
- light, easy to transport and quick to install, because no assembly is needed in the field, nor any intermediate anchoring or pegging
- teracro® is flexible and adapts to the supporting soil,
- its UV resistance allows exposure for several weeks pending revegetation

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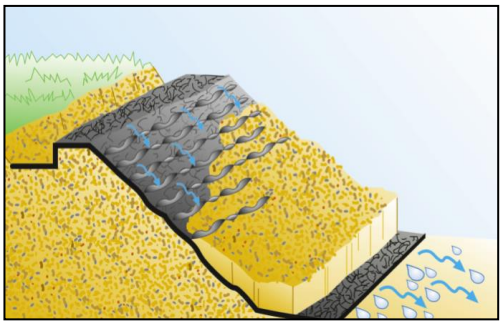
Solving a major problem bit by bit:

teracro® deals with problems of earth bonding, erosion control and slope protection via small slices of ground or small terraces, between each row of upstands: this is the well-known principle of dividing a big problem up into small portions to solve it more easily, ensuring great efficiency.
However long a slope may be, it will thus always be reduced to small zones.



Bonding questions

Are the teracro® kink joins strong enough?	Yes, because the force exerted on a kink is only the weight of the soil slice until the following kink. The strength is checked in factory.
Is the teracro® bottom strong enough?	The teracro®, bottom is sized according to the project and can be strengthened up to a value of 480 kN/m, appropriate for very large sliding slopes such as geomembrane liners, for example.
The teracro® kinks are flattened in the supplied roll; how do they operate?	When teracro®, is unrolled, the released end to return to their natural position as though they had memorized their shape. Moreover, the more the soil cover exerts a thrust against the filtering kink, the more the latter opens, rather like a fish's scale, by a “geodynamic effect”.
Does teracro® have to be pegged on the slope?	No, because the bottom of teracro®, has sufficient friction and strength to be anchored by a simple header trench, sized according to the application.
How fast can teracro® be installed?	teracro® delivered in rolls 4 m wide, is installed like a geotextile, at the same pace,i.e. very quickly.
How can links or joints be executed between teracro® panels?	By simple thermal bonding with a hot gas or hot air gun, very easily and quickly.
If I use teracro® on an embankment as a geomembrane liner, do I still need puncture-resistant geotextile?	teracro® advantageously replaces the puncture-resistant protection geotextile, because the latter is included in teracro® and forms the base of the product. The teracro® base varies in mass per unit area from 300 to 1200 g/m².
Can roots penetrate teracro® and become bonded to it?	Yes, the needle-punched nonwoven sheet of large-denier fibres is a porous medium cis a porous medium attracts the roots of vegetation, thereby contributing to its fastening.

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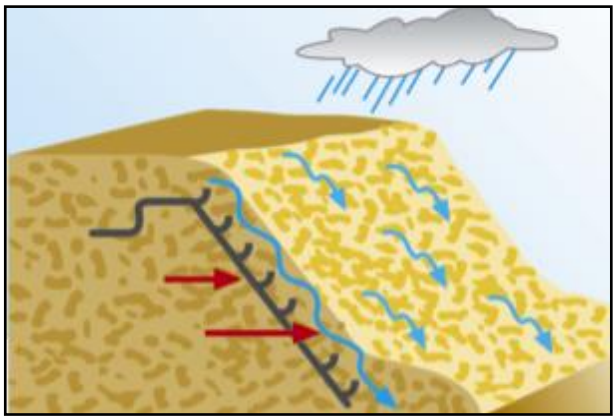
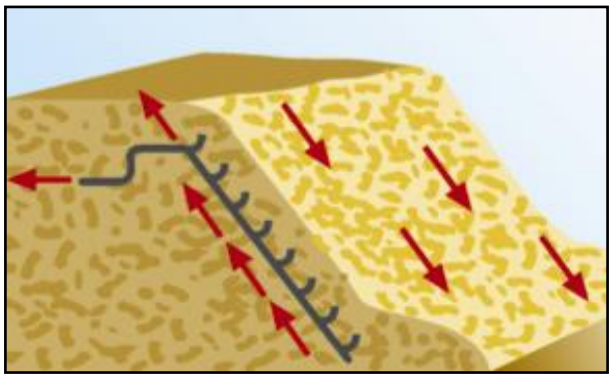
Installation technique

- plan a layout drawing to limit cutting out,
- provide for access for the installation team,
- prepare a flat, graded, compacted base, with no projecting elements,
- unroll the product on the ground with a shaft passed through the reel, or by hand, or suspend it from a lifting beam,
- the strips are bonded together by hot air gun,
- cut out the **teracro®** using a cutter, wearing gloves,
- provide for anchoring of **teracro®** (earth, rock, geo-membrane),
- only a head anchoring is necessary, generally no intermediate peg is required on the slope,
- unroll the panels from the top downward, with the panels overlapping one other by about 0.50 m on the side,
- backfill and compact the anchoring trench,
- backfill and compact the base anchor, then deposit the earth at the top,
- finally, apply top soil from the top, pushing it slightly downward. It then fits into the **teracro®** upstands. The built-up earth is then levelled and compacted slightly,
- provide for discharge of the network of mini-drains into a ditch or trench (**teracro TD®**).





Packaging

- **teracro®** can be delivered in rolls 4 m wide and 50 m long or in special lengths on request.

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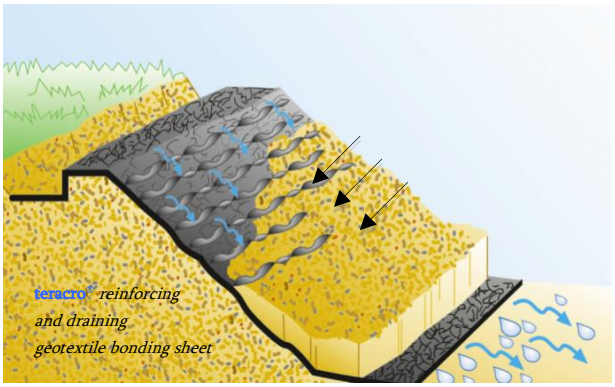
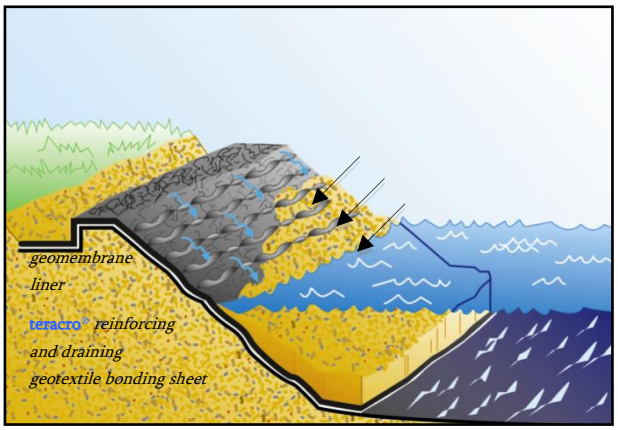
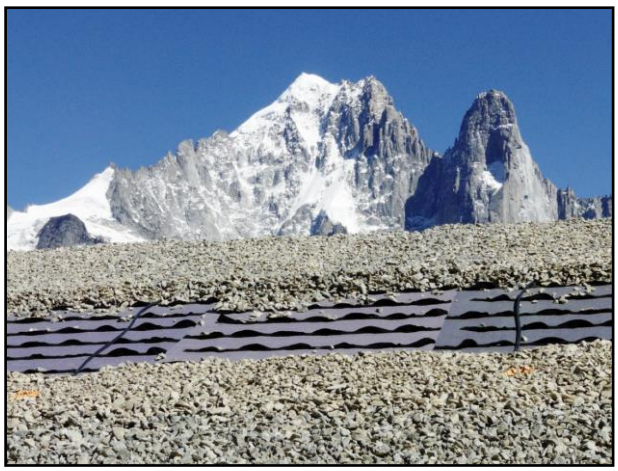
earth substrate
- motorway embankments
- reservoir embankments
- inundatable embankments
- landfill coverings
- dyke revegetation



geomembrane substrate
- protection and revegetation of waterproof reservoirs
- protection and revegetation of landfills





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