Texel®
BY/PAR ALKEGEN

Texel Geo-9

Reinforcing Geocomposite for Soils with Low Bearing Capacity

Installation Guide

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Texel Geo-9
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1. Product Description and Application

1.1 Product

Texel Geo-9 is a 100% polypropylene reinforcing geocomposite combining two geotextiles (one woven, one non-woven) by a needle-punching process. It combines the properties of these two technologies, optimizing the reinforcing properties of the woven geotextile and the separation and filtration properties of the non-woven geotextile.

1.2 Application

The multiple uses to which this product can be put make it an excellent solution for particularly soft soil infrastructures and difficult site conditions. It offers solutions in specific situations where the properties of conventional geotextiles are insufficient for infrastructure reinforcement. GEO-9 is ideal for city roads, forestry roads, parking lots, clayey soils and peatlands.

Texel Geo-9's rough and fibrous structure helps increase adherence with the underlying soil and ensure in-plane drainage.

2. Receiving, Handling and Storage

2.1 Receiving

Texel Geo-9 rolls are packed when manufactured to withstand standard on-site handling as provided in the standard ASTM D4873. An adequate mode of transportation must be used to avoid damage during delivery on-site.

Each roll is assigned a unique series number that may be used to trace the production lot, if required. Labels are placed on the following locations:

- On the packaging at the end of the roll
- On the material to one of the ends of the roll
- In the cardboard tube to one of the ends of the roll

When rolls are received, it is important to check the condition of the rolls and packaging.

2.2 Handling

The installer must handle the rolls so as not to damage them in any way. The rolls must be handled with a forklift or appropriate nylon straps so as not to damage the packaging or the product.

When they are unloaded on site, the rolls must not be dragged on the floor of the trailer or the ground, which could cause breakage of the packaging or material.

2.3 Storage

From the time they are received until they are used, the rolls must be stored on a clean, non-abrasive surface and be protected from any mechanical damage, prolonged exposure to ultraviolet rays, puncturing, tearing and anything else that could affect their quality. Damaged packaging can be repaired by applying protective adhesive tape, or a new bag can be used. Unused parts of the roll must be repackaged to protect them until they are used.

2.4 Health and Safety

⚠	At each step of the conception until completion, each worker must work safely. Whether it is for the materials, tools or machineries operation, working environment, the health and safety should be priorities.

3. Installation Instructions

3.1 Site Preparation

The site must be adequately prepared so as to render the surface homogeneous. Roots, large stones and other debris that could puncture the geocomposite must be removed. If construction is taking place on peatland, the vegetation cover must be preserved.

3.2 Geocomposite Installation

⚠	The geocomposite must be lightly stretched to avoid folds.

Figure 1 – Installation of Texel Géo-9

3.3 Overlap

One factory or on-site seam can replace the suggested overlap for longitudinal and/or cross-ways joins. The Contractor must anticipate in his bid an amount for losses due to overlaps and/or seams. The following table indicates the suggested overlap according to soil resistance:

Minimum Recommended Overlap		
CBR (%)	Cu (kPa)	Minimum overlap
Over 2	> 60	300 - 450 mm
1 - 2	30 à 60	600 - 900 mm
0.5 - 1	15 à 30	900 mm or seam
Below 0.5	< 15	Seam

⚠	When overlapping roll extremities, the direction of embankment construction must be taken into account to avoid uplift of the geocomposite.

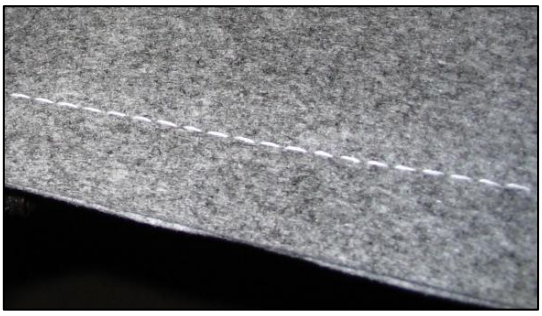

Figure 2 – Representation of a flat seam

For installation in a curve, minimum overlap must be respected for the external radius of the curve.

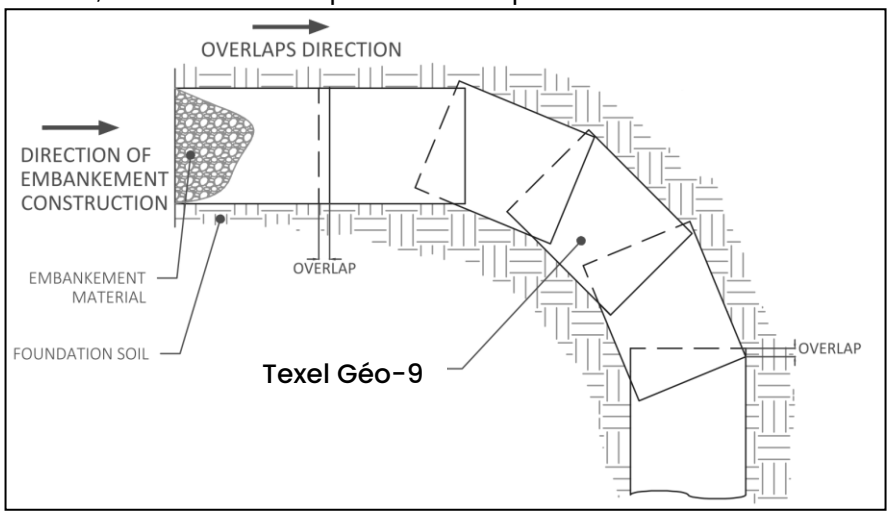

Figure 3 – Installation in a curve and direction of overlap

3.4 Embankment Construction

⚠	No equipment must be allowed directly onto Texel Geo-9.

Trucks must back up on a minimum of 300 mm of compacted granular material to unload. A crawler-tracked vehicle must be used to distribute the embankment fill.

Degree, type of compaction and maximum layer thickness are respectively obtained and chosen as a function of the properties of the foundation soil and embankment material.

For parking lot, basin and other open area construction, especially thick access roads must be built to accommodate trucks and other such equipment.

3.5 Repair of Ruts for Unpaved Roads

For unpaved roads where ruts are at least 100 mm deep, they must be filled in with new material rather than graded.

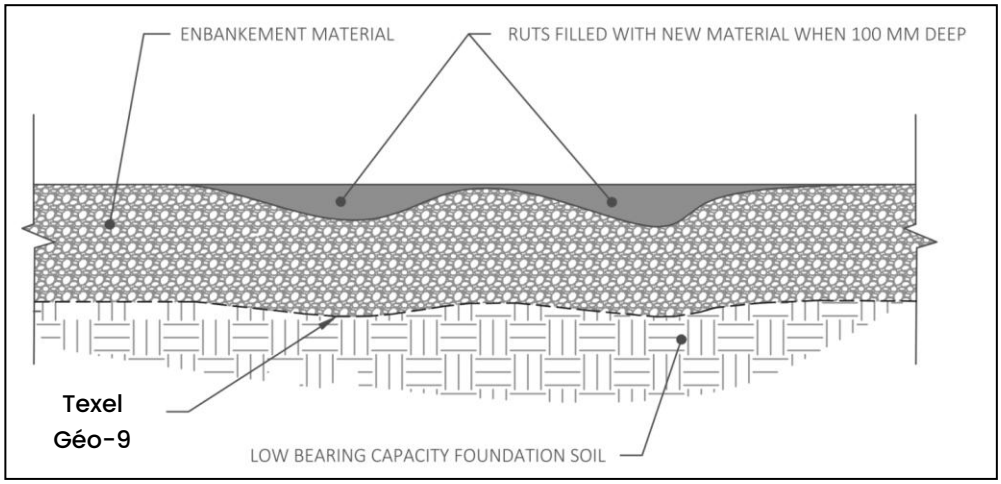

Figure 4 – Rut Repair

NOTE: Design must always be carried out by the engineer responsible for the project. Any information, verbal or written, transmitted by Texel Matériaux Techniques, may under no circumstances be interpreted as being of a conceptual nature. All information must always be validated and approved by the engineer responsible for the project.

WANT TO LEARN MORE?

Feel free to contact one of our representatives to discuss your project.
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Form A-6200
Effective 11/25

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