



INSTALLATION GUIDELINE

OSMORIA Geoclean Infiltration Trenches

Removing hydrocarbons and PAHs from stormwater



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1. INTRODUCTION

OSMORIA™ Geoclean® aquatextile is a high-performance material designed for integrated and sustainable stormwater management.

When installed in infiltration systems at the source, OSMORIA Geoclean aquatextile removes hydrocarbons and PAHs from stormwater, protecting the soil, surface water, and groundwater, while preserving environmental biodiversity.

For more information on OSMORIA Geoclean aquatextile, visit our website: aquatextileosmoria.com

OSMORIA Geoclean aquatextile is durable and well-suited for public works projects. It is lightweight and quick to install, but following a few key guidelines will ensure its functional performance and longevity:

- Adhere to the client's specifications for materials used in conjunction with or in contact with the prescribed aquatextile.
- Follow the installation recommendations detailed in this document.

2. BEFORE INSTALLATION

1. Layout plan

Before installation, it is recommended to create a layout plan to optimize the dimensions of the rolls with those of the structures. The plan should also account for overlaps between the strips.

Ensure a minimum overlap of 30 cm between the strips.

2. Storage of rolls before installation

Store the aquatextile rolls on a flat, clean, and horizontal surface on-site. Check for:

- Sharp objects or stones that may damage the material.
- Tears in the packaging due to weather or UV exposure.

Rolls can be stacked in a pyramid, up to a maximum height of three, on a stable horizontal surface. If storing for several weeks, protect the rolls from weather conditions, for example, by using a tarp.

Keep the rolls in their original packaging until installation. Retain the packaging to rewrap any partially used rolls.

3. Cutting the strips

Set up a cutting area outside the installation zone. Cut the strips to length as needed for installation and number them according to the layout plan.

3. INSTALLATION

1. Preparing the trench

Excavate the infiltration trench in soil that is permeable enough to allow water to filter through from the injection drain.

Ensure the trench bottom and walls are flat, and remove any sharp stones or protruding roots that could damage the OSMORIA Geoclean aquatextile.

2. Laying OSMORIA Geoclean aquatextile

Unroll the OSMORIA Geoclean aquatextile strips on the trench surface, covering the bottom and sides, following the layout plan and ensuring proper overlaps. The excess length of aquatextile used to cover the granular material should lie flat on the ground.

The blue side of the OSMORIA Geoclean aquatextile, when placed at the bottom and sides of the trench, should face the granular material. Water will flow from the blue side (granular layer, upstream) to the white side of the aquatextile (natural soil, downstream).

Typically, the aquatextile covers all four sides of the granular material—bottom, walls, and top—with a 30 cm overlap on top.

If the water level in the trench remains below the top of the granular layer, the aquatextile can cover only the bottom and sides. In this case, fold the aquatextile horizontally over the top of the granular material by at least 30 cm (Figure 6), and cover the trench with a separation geotextile (Figure 3).

A separation geotextile may also be placed between the natural soil and the aquatextile if additional separation is required (see Diagram 1: Infiltration trench in permeable soil).

3. Placement of granular material

Place the granular material into the trench progressively, ensuring that its grain size, thickness, and installation method align with project specifications to avoid damaging the aquatextile.

Do not dump the granular material directly into the trench. Use a hydraulic shovel to carefully place it. The injection drain will be laid in this granular layer and connected to the injection well.

No vehicle traffic is allowed directly on the aquatextile.

Once the granular material reaches its maximum height, fold the waiting aquatextile strips from the vertical walls onto the top of the granular layer.

If the aquatextile only partially covers the aggregate, cover the entire trench with a separating geotextile that is compatible with both the aggregate and soil. Ensure the geotextile overlaps the aquatextile by at least 30 cm.

As an alternative to granular material, the trench body can also be made of a lightweight honeycomb structure (SAUL). The principle of construction remains the same, with the aquatextile enveloping all sides of the crates.

4. Piping through the aquatextile

In the event of raw water entering the infiltration structure via a pipe, it is strongly recommended that the OSMORIA Geoclean aquatextile should not be crossed, or at the very least that the crossing should be made above the highest water level in the structure.

If it is impossible to follow these recommendations, the aquatextile must be sealed off from the supply pipe with the utmost care, as follows, to prevent untreated water from passing along the pipe.

Cut the aquatextile crosswise at the point where the pipe passes through the aquatextile. This cut should be made with a cutter, taking the necessary safety precautions. The length of both cuts should be slightly smaller than the diameter of the pipe.

The pipe is then forced through this cut-out, from the outside (grey side) to the inside (blue side) of the structure. OSMORIA Geoclean deforms and applies with perfect contact all around the pipe. Secure the 4 aquatextile corners to the pipe with a stainless-steel clamp.



Figure 1: Cross-cutting of aquatextile for pipe passage



Figure 2: Pipe passes through aquatextile in the cut-out

Make sure the pipe is stable at the crossing point, so that it does not transfer stress to the aquatextile,

4. Backfilling with cover material

Backfilling on top of the infiltration trench is carefully carried out with the specified cover material. It can be compacted if fine grading is required.



Figure 3: Covering the granular mass by the extra length of the aquatextile left on hold



Figure 4: Injection well to collect rainwater on the surface and inject it into the infiltration trench



Figure 5: The aquatextile wraps the granular layer including the injection drain, the blue side is oriented towards the granular mass (upstream of the flow)



Figure 6: Covering the top of the granular mass with at least 30 cm of aquatextile, pending installation of a separation geotextile



Figure 7: Covering the buried structure with a separation geotextile, at the end of backfilling the trench with granular material

4. SCHEMATIC DIAGRAMS

Diagram 1: Infiltration trench - Section AA (permeable soil)

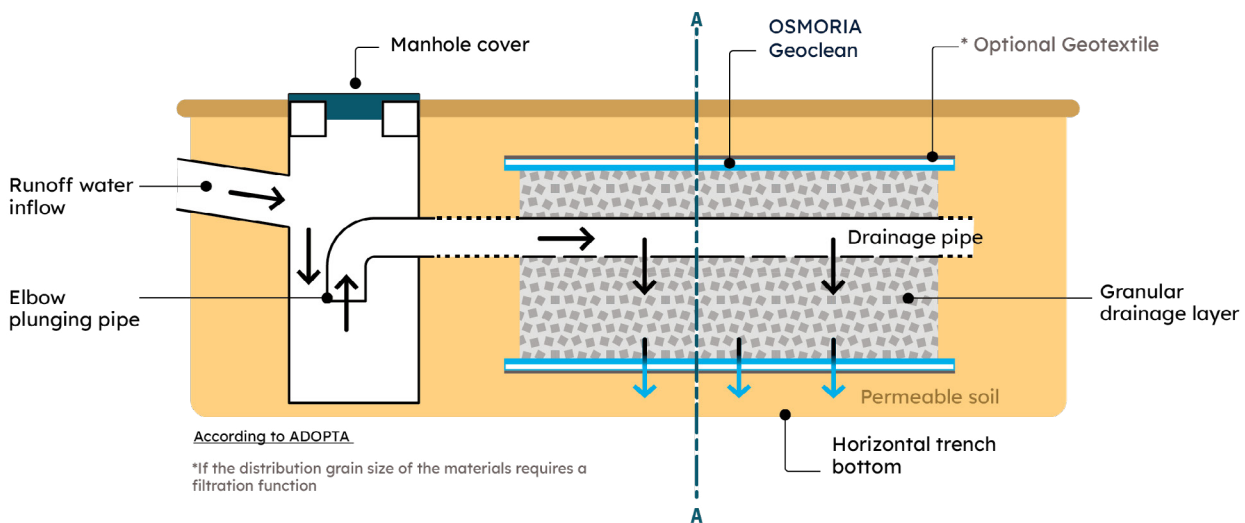
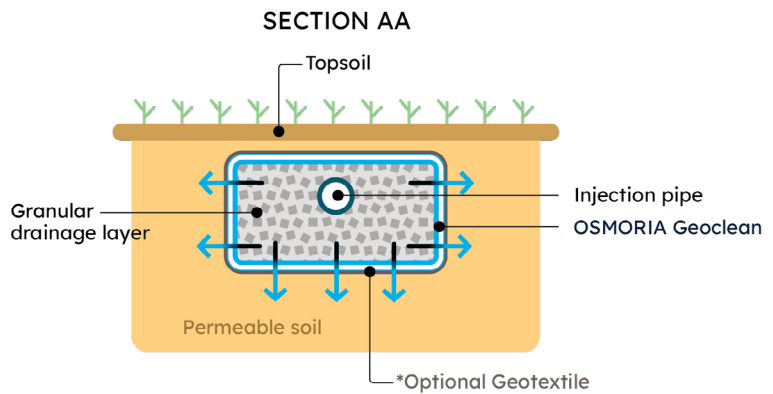


Diagram 2: Infiltration trench

About Solmax

Solmax is a world leader in sustainable construction solutions, for civil and environmental infrastructure. Its pioneering products separate, contain, filter, drain and reinforce essential applications in a more sustainable way – making the world a better place. The company was founded in 1981, and has grown through the acquisition of GSE, TenCate Geosynthetics, TenCate AquaVia and PROPEX. It is now the largest geosynthetics company in the world, empowered by more than 2,000 talented people. Solmax is headquartered in the province of Quebec, Canada, with subsidiaries and operations across the globe.

Uncompromised quality

Our products are manufactured to strict international quality standards. All our products are tested and verified at our dedicated and comprehensive laboratories which maintain numerous accreditations. We offer our partners a wide scope of testing according to published standards to ensure products delivered to sites meet specified quality requirements.

Let's build infrastructure better



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