

TECHNICAL AND COMMERCIAL INTRODUCTION DOCUMENT

LAYRONTEX

Smart Geotextile Treatment System for Interlocking Paver Surfaces

1. Overview

Interlocking concrete paver surfaces hold an increasing share of the global market, driven by infrastructure investment, urbanization and landscape architecture projects worldwide. The global market reached approximately USD 9 billion and 2 billion m² in 2024–2025, and is expected to grow at a compound annual rate of around 5% between 2026 and 2030, reaching USD 11.5 billion and 2.5 billion m² by 2030.

However, these surfaces face three persistent problems in the field: pavers that shift and lose stability over time, weed growth in the joints, and pests, ant colonies and moisture-loving insects nesting beneath the surface. LAYRONTEX is a product family developed to address all three problems through a single geotextile-based system.

2. Problems Addressed and the LAYRONTEX Solution

Problem	LAYRONTEX Solution
Pavers shifting and losing stability over time	A reinforced, stabilizing structure prevents paver movement and loosening
Weed and wild plant growth in joints and surface areas	Plant-based active ingredients suppress weed growth
Pest, ant and termite nesting in the dark, moist zone beneath the surface	Targeted treatment combinations provide pest and colony deterrence
Long-term protection requirements (logistics, public infrastructure projects)	Mineral-based treatment extends the protection period

3. Product Family Architecture

LAYRONTEX is built on a modular architecture combining three independent axes:

- Base geotextile type and biaxial tensile strength,
- Applied treatment (active ingredient) category, and
- Treatment duration tier.

This modular structure allows the same stocked base product to be customized to project requirements.

Code / Axis	Options	Application Area	Note
Base Structure — NW	5 kN / 10 kN / 15 kN / 20 kN (Non-woven, PP)	Permeable surfaces, filtration	Water permeability is the priority
Base Structure — W	5 kN / 10 kN / 15 kN / 20 kN (Non-woven, PP)	Garages, truck yards, logistics sites	Strength and stabilization are the priority
Treatment T1	Plant-based organic active compounds	Weed and wild plant control	Also provides a pest-deterrent effect
Treatment T2/T3	Plant-based + mineral-based combination	Ant and moisture-loving insect deterrence	Selected to suit dark/moist conditions
Treatment T4	Mineral-based antimicrobial	Long-lasting pest and microbial protection	Suitable for both NW and W; coating-only for W

Note: Treatment duration varies depending on the active ingredient and carrier system used; natural/plant-based treatments target approximately 12 months, synthetic/slow-release systems up to 5 years, and mineral-based systems a protection period closer to the geotextile's own service life (up to 25 years). Exact durations are confirmed through field and laboratory testing.

4. Application Method

Unlike conventional factory-based pre-impregnation methods, LAYRONTEX treatment is applied on site — after the geotextile is laid, but before pavers and aggregate are placed — through a controlled field application process.

- **Flexible, project-based customization** — Stock and logistics simplicity: a single, untreated base geotextile is transported to site; the treatment type is determined at the time of application according to the project specification.
- **Standardized dosage control** — Calibrated equipment (spray or similar application systems) ensures the targeted dosage (g/m² or mg/m²).
- **Structure-sensitive application** — The Woven (W) structure's lower permeability retains treatment better at the surface; the Non-woven (NW) structure prioritizes permeability, and dosage is optimized accordingly.
- **Sensory quality control** — A characteristic scent allows quick, practical field verification that application has actually taken place.

5. Target Application Areas

- Municipal infrastructure projects: pedestrian walkways, public squares, bus stops, parking areas.
- Ports, container yards and logistics centers: large-scale applications (hundreds of thousands of m²) under heavy traffic loads.
- Permeable paver systems: projects compliant with stormwater management and green infrastructure standards (LEED, BREEAM).
- Landscape architecture and special projects: long-lasting, low-maintenance decorative surfaces.

6. Target Partnership Models

- Distribution, dealership and stockist arrangements: seeking regional/global distribution networks.
- Architecture and design firms: technical reference documentation and sample support for specification inclusion.
- Public and infrastructure contractors: field application support and technical consultancy.
- Contract manufacturing partnerships: expanding capacity and geographic reach.

7. Contact and Next Steps

For sample requests, technical specification support or distributorship discussions regarding the LAYRONTEX product family, please contact us.

The product combination suited to your request (base structure, tensile strength and treatment type) will be determined together on a project-specific basis.

LAYRONTEX is a PaveCor Industry solution.

TURKAK trademark registration and patent / utility model application have been filed.

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