Ston'Art® FLOW

Permeable Surface Water Management System

A UV-resistant, resin–aggregate based active surface solution applied above ground.

Ston'Art Flow is **a multilayer permeable surface system** engineered in accordance with sound engineering principles to create an environmentally friendly surface infrastructure suitable for continuous traffic while requiring minimal excavation. The system safely distributes surface loads and, unlike traditional asphalt- or concrete-based solutions, **prevents surface water accumulation by allowing rainwater to infiltrate directly into the ground.**

It treats **the surface as an active infrastructure component that allows water to pass through, distributes it efficiently, and can be integrated with subsurface storage systems when required. Ston'Art Flow** that is fully compatible with sustainable drainage approaches **(SUDS – Sustainable Drainage Systems)**, offers **a durable and climate-resilient solution** for public spaces, landscape applications, and projects closely integrated with the natural environment.

Why Is It Needed? (Climate Crisis and Water Management Context)

With climate change, the increasing frequency of sudden and intense rainfall events has led to higher surface runoff, flood risk, and growing pressure on urban infrastructure. At the same time, diminishing water resources have made on-site rainwater management and reuse a necessity.

Rather than rapidly conveying rainwater away from the surface, this system enables water to infiltrate into the ground, supporting natural absorption processes, contributing to the continuity of the groundwater cycle, and providing a nature-based, climate-adaptive infrastructure solution in response to the climate crisis.

Performance Characteristics

Thermal shock and UV++ resistance: A surface structure that maintains color stability under prolonged sun exposure in outdoor conditions

High water permeability: A layered system supporting up to 80% rainwater infiltration into the ground

Active surface approach: Controlled conveyance of water into underlying without surface retention

Public-use safety: Surface texture designed to reduce slip risk

Final performance is evaluated in conjunction with soil conditions, rainfall patterns, sublayer designs, and maintenance requirements.

Advantages

Does not allow rainwater to accumulate on the surface; conveys it directly into the soil

Mitigates sudden load impacts on infrastructure and drainage systems

Can be integrated with underground water storage solutions

Forms a natural surface compatible with landscape applications and public spaces

Delivers a durable, climate-adaptive, and sustainable infrastructure approach

Paye Construction has taken its extensive field experience in stone carpet and pebble systems a step further by focusing on the development of on-site **rainwater management solutions in response to the growing impacts of climate change and declining water resources.** Within this framework, the **Ston'Art Flow** systems have been developed and implemented.

This approach considers the surface not merely as an aesthetic or load-bearing element, but as an active infrastructure **component that manages water, enables infiltration into the soil, and allows for storage when required. Ston'Art Flow** is the on-site implementation of this vision.