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Prima Idro® - DATA SHEET

CEMENTITIOUS DRAINING SYSTEM

When it is necessary to create or renovate the external flooring of a public or private space, be it a square, a pedestrian avenue, a public park or external paths within residential complexes, the most complicated aspect of the design is choosing the most suitable material. **Suitable taking care of the drainage or filtering of rainwater**.

Essentially, right from the design stages, is the choice of **certified materials** that **concretely collaborate** to improve the outdoor areas, avoiding as much as possible the creation of new waterproof surfaces (such as asphalt and concrete) and/or unstable (such as self-locking and loose gravel).

Draining concrete, as the word itself indicates, is a very porous concrete that is permeable to liquids. These floors are an eco-sustainable solution to solve the problems related to the development from scratch or redevelopment of some urban areas compatible with the values of respect and protection of the environment, supporting naturally the reintegration of groundwater and the influx reduction of the same on road surface.

All parties should be aware that during installation, the concrete may show bleed marks due to certain, often unavoidable, variables in the mixture.

The operating mechanism is simple: the water reaching the surface of Prima Idro® passes through the entire structure, reaching underground and regenerating the groundwater. Part of the water is returned to the environment through evaporation, improving the thermohygrometric conditions of the place.

Prima Idro® r**esponds effectively to the requirements of sustainability and stability** over time, it also allows the drastic reduction of water capture structures (also called underground water services), **reducing the general costs of the project, construction, and subsequent maintenance**.

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BENEFITS

COMPLETELY AND IMMEDIATELY DRAINING

The open-pore structure allows rainwater to drain naturally underground. The minimum drainage capacity of Prima Idro® is approximately 150-180 liters / m2 / minute. The water table is regenerated.

ENVIRONMENTAL BENEFITS

Prima Idro® helps reduce pollutants in runoff waters. The water is held by the upper surface of the roadway, which prevents it from being transported in the waterways. The maximum flow rate through sewer lines is reduced.

ECONOMIC BENEFITS

Prima Idro® is a valid alternative to the construction and subsequent maintenance of underground utilities dedicated to the collection, channeling, and disposal of rainwater in paved areas while reducing the need for large holding tanks, as it acts as a collection and detention area.

HEAT ISLAND EFFECT

The surface cools down faster as the porous material facilitates the passage of air.

RESISTANCE AND SAFETY

Durability to freeze-thaw cycles (snow-covered draining concrete is able to eliminate it much more quickly than conventional flooring).
It strongly improves road safety in case of rain. The high porosity allows for faster melting of the snow.

DRIVABLE AND PEDESTRIAN

It has a high mechanical resistance, being a suitable solution for both pedestrian and vehicle transit.

MAINTENANCE

Easy ordinary and extraordinary maintenance and lower operating costs.

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Product technical data

Medium thickness	10 cm pedestrian - 15 cm driveable (</=35 quintals) 20 cm driveable (> di 35 quintals)
Color	Base color natural gray, sample colors on demand.
Max diameter aggregate	From 6 to 11 mm – from 8 to 22
Compression resistance at 28 days **UNI EN 12930-3**	> 15 Mpa N/mm^2
Fresh density	> 1650 kg/m^2 about
Porosity	≥ 15% < 25%
Draining Capacity (medium value) **UNI EN 12697-40**	5,78*10-3 m/s ≥ 150-180/ liters/m^2/minute
Free surface area (draining)	≥ 20%
Free surface area (draining)	≥ 1Mpa
Material Yield	18 kg/mq spess. 1 cm** about
Product appereance	bulk

* Depending on the type and level of constipation achieved

** Value for average constipation

Where

Draining road surfaces
Pedestrian and cycle paths
Secondary and access roads
Avenues and roads in areas subject to environmental protection or of historical interest
Paths adjacent to sports facilities and golf courses
Parking areas
Industrial and commercial yards

Support and implementation

Prima Idro® have to be realized on a draining substrate or substrate (up to about 20 cm for pedestrians - up to about 40 cm for vehicles) with inert granulometry varying between 70–15 mm (nominal) positioned in a pyramid and clean, without fine parts that can compromise drainage. The surface must be compact, coplanar, and uniform, to guarantee perfect adhesion of Prima Prima Idro®. The substrate made in this way will be more durable and less wearable. The compacted substrate increases the load-bearing capacity of the work and significantly reduces the risk of damage due to wear. The substrate, which is also draining, is complementary and functional to Prima Idro® for the reintegration of groundwater and the reduction of its flow on road surfaces.

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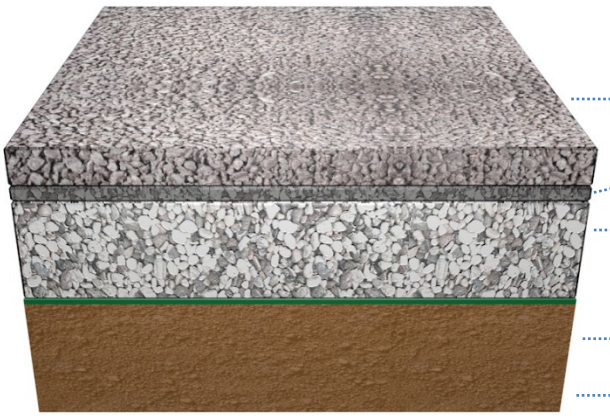
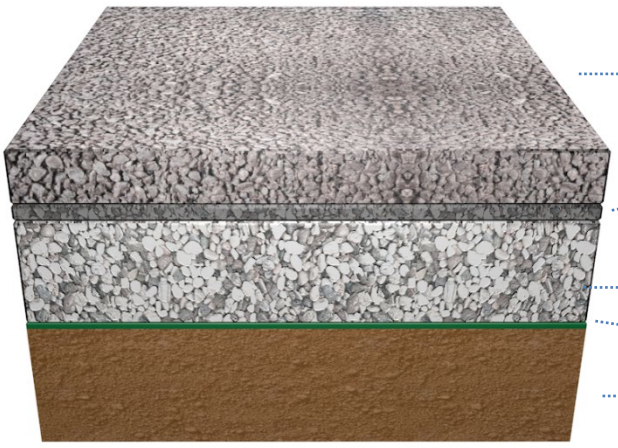
Stratigraphies

Prima Idro® on permeable concrete - Pedestrian and cycle paths



Prima Idro® on permeable concrete – Traffic version



* Nominal values