

Technical Data



Hydrophilic Substrate

DESCRIPTION

VYDRO[®] hydrophilic substrate is used in the construction of green roofs and vertical walls and is characterised by the ability to manage and retain water. VYDRO substrate can be supplied in various thickness and profiles to meet the end user requirements. Geotextile fabric can be laminated on one or both sides of the substrate.

Typical Properties

Foam density (kg/m ³)	ISO 845	29 – 39
Foam hardness (40% compression measured at 1 st cycle)	ISO 3386-1	7 -12 kPa
Swell test (Volume increase after 24hrs)		10 – 20%
Water uptake (grams after 24hrs)		> ^x 25
pH value		6 – 8
pF 0 value	ISO 11274 (*)	60 – 80%
Water buffer capacity (pF 0 – pF 1)	ISO 11274 (*)	40 – 60%
Determination of microbiological resistance	DIN EN 12225	100%
Determination of oxidation resistance	DIN EN 13438	100%
Determination of chemical resistance	DIN EN 14030	100%

(*) Test method amended for VYDRO hydrophilic foam (10x12x7.5cm)

APPLICATIONS

VYDRO hydrophilic substrate can be used as a water retention foam for the composite construction of both extensive/intensive green roofs and vertical walls.

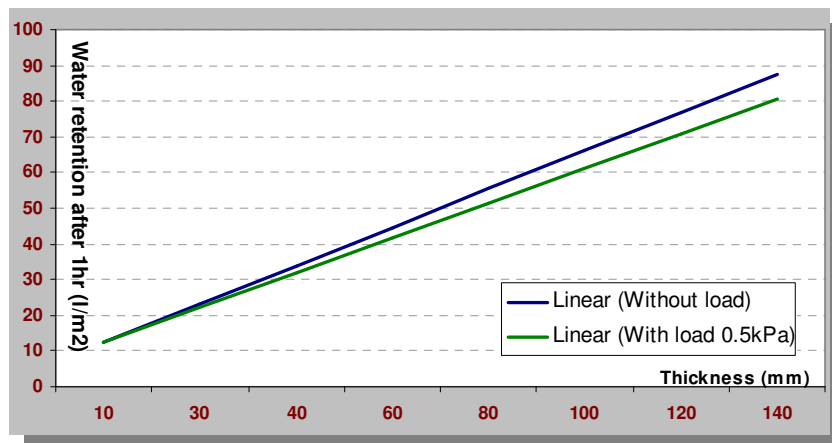
HANDLING AND STORAGE

The lightweight nature of VYDRO hydrophilic substrate means that they are easy to handle and are suitable for the retrofitting of existing roof structures. Exposure to direct sunlight will adversely affect the colour of the VYDRO substrate.

VYDRO substrate is a non-irritant material that does not present any toxic hazards. VYDRO substrate should be stored in a dry covered area at ambient temperature away from direct sunlight until ready for use.

How to determine the water retention of VYDRO® substrate?

- The chart below can be used to determine the thickness of VYDRO substrate needed to give the required water retention performance. It gives the water retention performance, expressed as litres/ m², over the range thickness from 10–140 mm. The chart indicates performance both unloaded and with a typical nutrient and plant loading of 0.5 kPa.
- The water retention performance is calculated by the green roof designer and determined by the type of plants to be grown and the local micro climate conditions (rainfall levels, seasonally, temperature, etc.)
- Reading off the water retention performance on one axis allows the designer to read the thickness required on the other axis.
- For example. If the designer has determined he needs a water retention level of 30 litres/ m². Reference to the chart will indicate he needs a thickness of VYDRO substrate of 30 – 40 mm.



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