

## SEMI-HYDROCULTURE – SYSTEM DESCRIPTION

### General:

With standards developed over decades, hydroculture now offers an optimum solution for the long-term watering of ornamental plants in the private and commercial sector. This is not only demonstrated by the watering intervals that it enables, but also by other advantages. For example, hydroculture plants can generally remain in their planter for many years without needing to be repotted.

Due to the outstanding commercial success of hydroculture, horticulturists and commercial enterprises from the soil-grown plant sector are always striving to provide alternatives to hydroculture. The opportunity to use commercially available soil-grown plants is the fundamental difference that unites all "semi-hydroculture".

Several systems have developed to date that, among other things, are based on supplying the soil-grown plants with water via an alternative substrate.

Here we wish to present two alternative substrates that, in our experience, are suitable for use with soil-grown plants in what is known as a semi-hydroculture system. Both substrates are available in commercial 50-litre bulk packs.

### LECADAN® or Ökostrat®

Soil-grown plants can be planted in Lecadan® or Ökostrat® using water-tight planters and commercially available water level indicators. The advantage is that the entire range of up-to-date, modern planters from the hydroculture sector can be used. Lecadan® and Ökostrat® are the brand names of different retailers for crushed expanded clay in a similar granular form. Both are special substrates for use with ornamental plants.

With these substrates, the significant difference to hydroculture is the physical means of water storage. While the capillary force in hydroculture substrate is low and water is stored in a reservoir, Lecadan® / Ökostrat® substrate has a significantly higher capillary force. This means that the substrate absorbs and stores water.

So monitoring via the water level indicator has to be assessed differently than is the case in hydroculture:

Water-saturated, fully soaked substrate has a significantly larger reserve when the water level indicator reads 0 than conventional expanded clay. The reaction of the water level indicator after watering is also completely different. The water is absorbed by the capillary force and the water level displayed drops relatively quickly compared to hydroculture. Experience also shows that the reserve when the water level reads 0 could last another 8 to 14 days, depending on the time of year and the location.

### Special application:

For Mediterranean plants especially, for example olive trees, it is preferable to plant them in semi-hydroculture systems in order to achieve an appropriate watering interval in internal landscaping. Due to the special characteristics regarding water monitoring and the somewhat more complex liquid fertilisation, Lecadan® and Ökostrat® have a special status and are used particularly in the professional sector. They are relatively unknown in the private sector.

More information about the characteristics, intended purpose and disposal instructions of expanded-clay substrates can be found in the PDF "Expanded-clay plant substrate info data" on the Hydro Klein download page.

If you have any questions, please contact us at: [www.hydro-klein@email.de](mailto:www.hydro-klein@email.de)