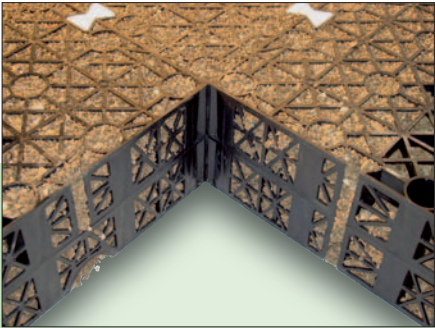


ENREGIS/Biocalith MR

Biofiltration substrate, fully biological
surface filter as tray substitute for
subterranean utilization



- › Adequate tray substitute
- › no loss of surface aboveground
- › highest ionic conduction
- › no extensive peeling of tray
- › no risk of accident due to insecure trays



ENREGIS/Biocalith MR - Compact and good

In many places, the infiltration of more or less polluted water into the soil and thus into the ground water has to be done through an animated tray. Normally, the tray is defined as an aboveground, ca. 30 cm thick, overgrown filtering body. When water flows through it long enough, is gets filtered and cleaned. Harmful substances remain in it where they are degraded biologically. Unfortunately, this means of water treatment needs a tray large enough for the respective amount of water.

Large areas connected together and the resulting tray or infiltration ditch sizes make it oftentimes difficult to implement an infiltration because of the required space. Furthermore, insufficiently secured tray systems bear a significant risk for playing children.



Picture shows high efforts to secure a vegetated swale

The certified **ENREGIS/Biocalith MR** system offers a solution to these problems.

The **ENREGIS/Biocalith MR** material has been used for almost two decades in the treatment and cleaning of water in different fields such as swimming ponds and sewage treatment.

The high permeability ensures an optimal streaming hydraulics. The large inner surface of **ENREGIS/Biocalith MR** leads to an optimal exchange of chemical substances such as iron in the process of phosphate bonding; regulation of the ph-value and enables the settling of different micro-organisms for the degradation of water and sewage ingredients such as ammonium, nitrite and nitrate.

The contained micro and middle pores play a considerable role.

The reduction of inorganic and organic harmful substances is conducted in separate steps. The degradation of inorganic substances takes place in special upstream funnel filters. Since the absorption of heavy irons is an irreversible depository process, the utilized substrate has specific durabilities depending on the size of the connected areas, the amount and state of

pollution of the water to treat. After that, the material can easily be replaced with a new filling.

The organic treatment takes place in a hollow infiltration ditch. The substrate is inserted 20 cm thick free of compression into the ditch. The following process of treatment is a biotic and abiotic sorption, precipitation and complexation with contribution of dissolved oxygen, certain ingredients within the substrate and bacteria. Constant conditions create the processes and micro-biological helpers create the environment. Normally, the reduction is a regenerative degradation process: the substrate can degrade harmful organic substances. A replacement of **ENREGIS/Biocalith MR** is unnecessary as long as the conditions (e.g. administration of oxygen) are kept.

It is an outstanding and secure alternative when inserted into a subterranean infiltration ditch.

Data and Facts

Product name	
ENREGIS/Biocalith MR	
Technical data	
Graining (mm)	0 up to 3 0.5 up to 8
Water permeability k (m/s)	7.0×10^{-5} 3.4×10^{-3}
Total volume of pores (%)	approx. 40
Max. water capacity (%)	approx. 35
Adsorption capacity (mmol/Z/l)	>50
Ph-value	6 up to 7.5
Filter volume	approx. 10 m³ per 1000 m² connected and sealed area
durability	regenerative/ unlimited



Certificates/Tests
Environmental compatibility according to LAGA-ZO
Foreign expert opinion according to ATV-DVWK-A 138
Foreign expert opinion according to ATV-DVWK-M 153
Foreign expert opinion of the university of Darmstadt

- Advantages
- no loss of space due to subterranean installation
 - no replacement necessary, biologically regenerative
 - regulation of contact time possible
 - simple insertion into the infiltration ditch
 - highest security due to subterranean application
 - integrated protection against dry running
 - integrated regulation of optional feeding pump