

FerroSorp® GW

Adsorber materials based on iron hydroxide for the restoration of lakes

General

The eutrophication of lakes is one of the most frequent problems of quality of water worldwide. The use restrictions which come along with the eutrophication, e. g. concerning drinking water abstraction, fish farming or public baths often lead to efforts for an improvement of the trophic situation.

It is the excessive availability of phosphorous in the water and in the sediments which leads to an increased biomass production, which is regarded as the underlying reason for eutrophication in lakewaters.

However, phosphorous also represents the limiting factor for eutrophication. Lake eutrophication can be actively countered by systematically reducing and limiting the concentration of bioavailable phosphorus in the lakewater.

One very simple and effective method for limiting lake eutrophication consists of fixing phosphorus to the surface layer of our iron hydroxide-based **FerroSorp® GW** particles. A full range of Ferrosorp GW pellets has been developed in order to meet a myriad of demands and variables with respect to lakewater treatment technology, making phosphate elimination possible by way of in-situ and/or ex-situ measures.

Operation

In a first step phosphate ions in aqueous solutions are adsorptively bound to the surface of **FerroSorp® GW**. In a subsequent reaction the conversion to stable iron phosphate occurs according to the following equation:

Range of products

FerroSorp® GW is available in the following standard grain sizes:



0 – 0,5 mm

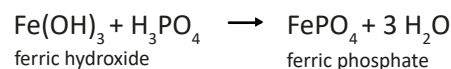


0,5 – 2 mm



2 – 4 mm

The illustrations are not to scale.



Examples of application

The recommended use of **FerroSorp® GW** can be determined by way of grain size for the following methods:

- Grain size 0 - 0,5mm and liquid product: in-situ treatment of lakes
- Grain size 0,5 - 2 mm: application in rapid filters floating on the water and respectively fixed on the bank
- Grain size 2 - 4 mm: this product is available in special filter bags so e. g. a "nutrient latch" can be build in the inflow

Advantages at a glance

- High efficiency at low costs
- High loading rates because of a highly porous surface

In comparison with ferric or aluminium salt solutions:

- No diversification of the pH-value in treated water
- No injection of anions into the water
- No hazardous substance - easy storage and handling

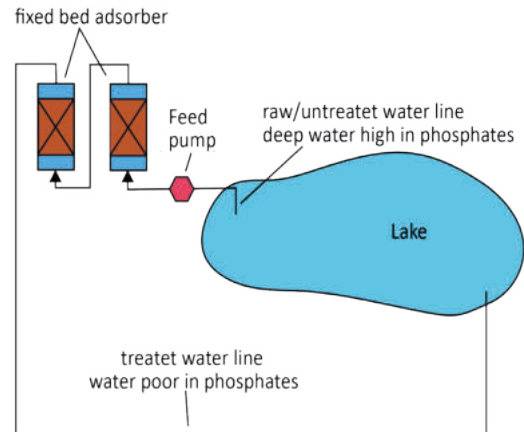
**We gladly advise
you individually!**

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Examples for application variants



Phosphate removal with a FerroSorp GW fixed bed adsorber



"Nutrient Latch" with Ferrosorp® GW (2 - 4 mm) in filter bags



Detailed view of the barrier made of filter bags

