

FerroSorp® S

Pelletised hydrogen sulfide filter media for external desulfurization in agricultural biogas plants

Many plants around the globe are utilizing organic materials such as animal manure, food waste, maize, grass, wheat and more to produce biogas. The biogas plants are perfectly suited to close ecological cycles, in order to reduce the carbon footprint, increase resource efficiency and add value to local economies. – providing they operate efficiently and predictably.

However, to achieve that, there is a strong demand for a robust, high quality, versatile, effective and economical solution to remove H_2S in the best possible way.

Fortunately, our scientists engineered FerroSorp® S media pellets to overcome even the most difficult H_2S problems, thus providing biogas plant operators with the **ideal solution to bind H_2S** .



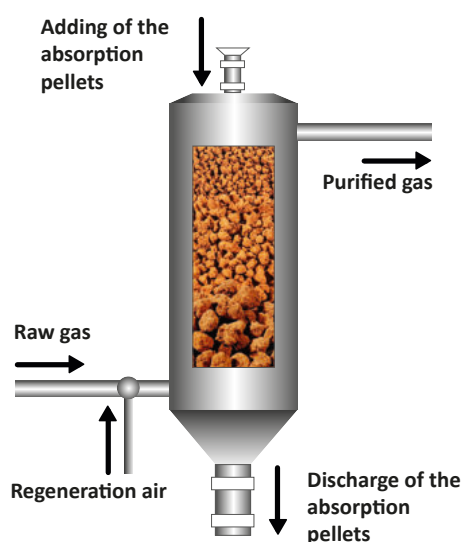
Agricultural biogas plant
(Source: Wolfgang Jargstorff | stock.adobe.com)

FerroSorp® S – a high quality product **Made in Germany** – is a pelletized and highly effective media based on iron hydroxide. For over 20 years FerroSorp® S has proven itself to be **the best product for the job**, even under some of the harshest, most-challenging gas conditions. The result is, that each year more and more sites around the globe opt for using FerroSorp® S as their **solution to the H_2S problem**.

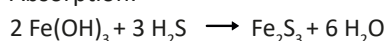


The process

Gas containing H_2S is passed through a filter vessel filled with FerroSorp® S media pellets. Two chemical reactions occur: First, H_2S and iron hydroxide react to form solid iron sulphide. Second – either simultaneously or in a parallel vessel – oxygen converts the pellets back into iron hydroxide in a process called regeneration. Elemental sulphur is formed and accumulates within the pores of the media pellets, which results in high loading rates, long media lifecycles, and minimised clumping.



Absorption:



Regeneration:



Advantages

- Well proven, non-hazardous product
- 20+ years of experience
- Low removal costs for H_2S compared to other leading technologies
- High loading capacities due to selective desulphurisation
- Fast reaction, achieves 0 ppm H_2S at outlet
- Easy handling
- Superior performance in gases without air/ O_2
- Possible use as fertilizer*
(* depending on regulations/legislation)

You can choose from our broad selection:



FerroSorp® S 2 - 4 mm



FerroSorp® S 2 - 8 mm



FerroSorp® S 5 - 25 mm

Note: Illustrations are not to scale.

**We gladly advise
you individually!**

HeGo Biotec International GmbH

Goerzallee 305b · 14167 Berlin
Germany

Phone: +49 30 84 71 85 50

Email: info@hego-biotec.com

www.hego-biotec.com

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FerroSorp[®] DG

The right way to desulphurize

We offer:

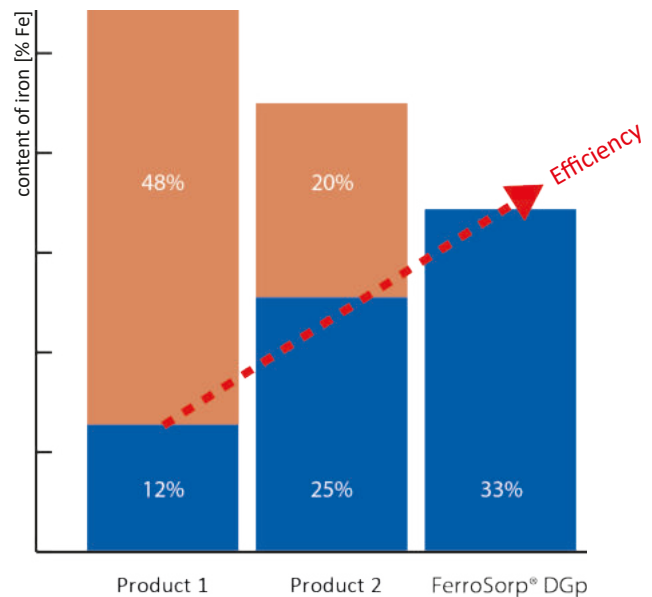
- Highly amorphous iron hydroxides
- Guaranteed fast reaction
- Premium products from certified production (according to DIN ISO 9001:2015)
Made in Germany
- Fertilizer compliant in many countries due to high purity
- Free from hazardous substances

Reactions and benefits of our FerroSorp[®] DG series for your system:

- Safe and sure H₂S elimination
- Binding of sulphides within the fermentation substrate
- Increased availability of in-process trace elements
- Increased buffer capacity
- No salt build-up in the fermentation substrate
- Sulphur remains available for plants in digestate
- Uninhibited methanogenesis and optimized biogas yields

Not all iron is the same:

- Amorphous
- Crystalline
- - Efficiency



High iron content says nothing about efficiency

The FerroSorp[®] DG series offers the optimal product for every system!

We gladly advise you individually!



Our efficient iron hydroxides



FerroSorp® DGp

It all started here:
powdered iron hydroxide with
an accelerated reaction for
residence times > 15 days
grain sizes 0 - 0.5 mm



FerroSorp® DGm

The further development:
powdered iron hydroxide for
retention times > 100 days
grain sizes 0 - 0.5 mm



FerroSorp® DG+

Iron hydroxide powder
- but low in dust
grain sizes 0.06 - 0.5mm



FerroSorp® DGμ

The finest of the finest:
powder with the fastest reaction rate
optimal grain size < 10 μm

Packaging

- All our powdered products are shipped in practical, fermentable sacks or big bags, on one way pallets or loose as bulk goods.

Longevity for your plant - with proper desulphurization!

Talk to us!

**We gladly advise
you individually!**

HeGo Biotec International GmbH
Goerzallee 305b · 14167 Berlin
Germany
Phone: +49 30 847 185 50
Email: info@hego-biotec.com
www.hego-biotec.com

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Iron hydroxide in municipal wastewater treatment



Aerial view of a wastewater treatment plant, individualized with possible applications of products from HeGo Biotec GmbH
(Source: peteri | stock.adobe.com)

Iron hydroxide - the allrounder

Whether in pollutant removal from stormwater (1.), odor and corrosion control in the sewer system (2.), phosphate elimination in wastewater treatment plants of all sizes (3.), or sludge digestion and digester gas treatment (4.) - our iron hydroxide-based products are a real alternative along the entire treatment chain of municipal wastewater.

Would you like to learn more? Our staff will be happy to advise you individually!



FerroSorp® DG - products



FerroSorp® S - products



1. FerroSorp® RW – special adsorbent for the treatment of storm water runoff



Rain runoff on the roadside (Source: JJ Gouin|stock.adobe.com)

This iron hydroxide based mixed granulate has been specially developed for the separation of nutrients and pollutants from stormwater runoff and is suitable for use in both manhole and retention soil filters.

Your advantages:

- Cost-efficient and effective, with long operating time
- Simultaneous binding of phosphate, mineral oils and heavy metals
- Resistant to De-icing salts

2. The GoSil® process - for the prevention of corrosion and odor in the sewer network



Interior view of a sewer pipe (Source: Mulderphoto|stock.adobe.com)

GoSil® products are liquid reactants based on iron hydroxide. These products, which are not classified as hazardous to water, prevent the formation of hydrogen sulfide (H_2S), which leads to corrosion and odor in the sewer system.

Your advantages:

- Safe reduction of H_2S in the sewer network
- Year-round operation possible
- GoSil®-dosing system with economical consumption due to intelligent microprocessor control

3. FerroSorp® AW / DGf-Tz – for phosphate elimination



Algae formation in the effluent of a wastewater treatment plant, e.g. due to high phosphate concentration (Source: Horst|stock.adobe.com)

The filter granulate Ferrosorp® AW was specially developed for phosphorus elimination in the effluent of small wastewater treatment plants. Our earth-moist Ferrosorp® DGf-Tz represents an ecological alternative to the use of iron or aluminum salts in phosphate precipitation in municipal wastewater treatment plants of any size.

Your advantages:

- Your high cleaning performance at low cost
- Easily retrofittable solution
- Regenerability of the filter granulat



4. FerroSorp® DG – for the removal of hydrogen sulphide internally (H₂S)



Wastewater treatment plant with digestion towers (Source: Arnd Drifte|stock.adobe.com)

These iron hydroxide based powder products are characterized by a high amorphous iron content, which is crucial for safe and efficient H₂S elimination.

Our products guarantee an optimal removal of H₂S when used in the fermenter.

Your advantages:

- Binding of the sulphides already in the digester.
- No salinization of the digested sludge
- Uninhibited methanogenesis and optimized digester gas yield

5. FerroSorp® S – for the external desulfurization of hydrogen sulphide



Biogas plant with fermenter and external gas storage (Source: sauletas|stock.adobe.com)

FerroSorp® S is a pelletized and highly effective adsorbent based on iron hydroxide. With our formed gas cleaning compound we offer you a robust, versatile, effective and economical process for the best possible removal of H₂S from sewage gas.

Your advantages:

- Proven for over 20 years
- Very economical, high efficiency, high loading rate
- Achieves 0 ppm H₂S in the clean gas

**We gladly advise
you individually!**

HeGo Biotec International GmbH
Goerzallee 305b · 14167 Berlin
Germany
Phone: +49 30 84 71 85 50
Email: info@hego-biotec.com
www.hego-biotec.com

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