

GoSorp[®] G-S

NaOH-impregnated activated carbon for the combined removal of hydrogen sulphide and VOCs from sewage gas / biogas

The problem

Many wastewater treatment plants have problems with hydrogen sulphide (H₂S), which causes corrosion and usually leads to additional costs for machines and equipment that need to be replaced prematurely. In the worst case, the manufacturer's warranty may even be voided. In addition, oxidation catalysts, which are used in most modern combined heat and power plants, require a particularly low H₂S content in order to perform well and for a long time.

This results in a particularly high demand from sewage treatment plants for a robust, high-quality, versatile, effective and economical process for the best possible removal of H₂S and other acidic and organic pollutants such as VOCs and siloxanes from the sewage gas.

Whatever your requirements, GoSorp[®] G-S makes an important contribution to your ideal solution.

The solution

GoSorp[®] G-S is an activated carbon impregnated with NaOH (sodium hydroxide) - especially for the combined removal of acidic gas components (esp. hydrogen sulphide) and organic impurities (e.g. siloxanes).

Under ideal operating conditions (humidity, H₂S and O₂ concentration, contact time, temperature), a sulphur loading capacity of up to 70 % can be achieved. Abrasion resistance is maximized due to the optimized product design. GoSorp[®] G-S is available in granulated or extruded form in various particle sizes and thus meets the different requirements for pressure loss.

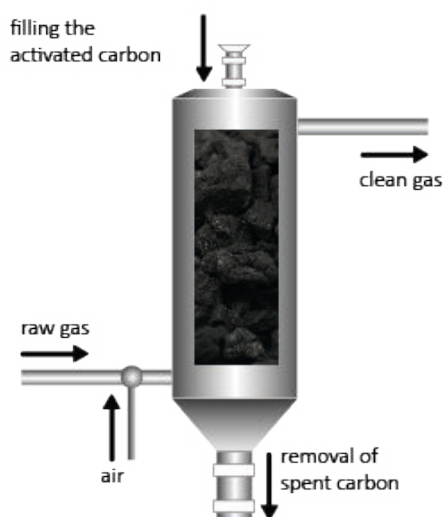
As an impregnating agent, NaOH is currently the best possible compromise between loading capacity and price. GoSorp[®] G-S is manufactured as a branded product in one of the most modern production sites for activated carbon in accordance with high quality standards.



waste water treatment plant
(source: Thomas Leiss|stock.adobe.com)

The process

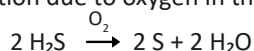
The NaOH impregnating agent applied to the GoSorp® G-S reacts with the H₂S to form Na₂S, which is deposited as a solid on the activated carbon surface (so-called chemisorption). At the same time, H₂S is oxidized under the catalytic influence of the activated carbon with O₂ in the gas to form elemental sulphur, which is deposited in the pores of the activated carbon. The organic gas components are non-specifically bound to the activated carbon due to their polar properties (physisorption). The adsorbent is not chemically altered in the process.



Reaction due to impregnation:



Reaction due to oxygen in the gas:



**We gladly advise
you individually!**

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Advantages

- High loading rate for H₂S
- Ideal to treat sewage gas with air dosing
- High abrasion resistance
- Very low dust content - also advantageous for product handling and filling
- Low self-ignition potential due to low ash content

Additional services

- GoSorp® G-X for the selective removal of Siloxanes and VOCs
- Support with disposal
- Media exchange service
- Gas analysis
- Mobile filters
- Small bags and big bags

Select the right grain size:

GoSorp® G-S inextruded pellets:

- 5 mm diameter
- 4 mm diameter
- 3 mm diameter
- 2 mm diameter

GoSorp® G-S as granules:

- **3x6 mesh (3.35 - 6.30 mm) standard size**
- 4x8 mesh (2.36 - 4.75 mm)
- 6x12 mesh (1.70 - 3.35 mm)
- 8x16 mesh (1.18 - 2.36 mm)

