
Application information

FerroSorp[®] DG

Desulphurication substance for the removal of hydrogen sulphide in anaerobic processes

FerroSorp[®] DG is a powdered desulphurication substance, based on ferric(III)-oxidhydrat FeO(OH). It is put preferentially by hydrogen sulphide into anaerobic reactors for the binding. The hydrogen sulphide arises in anaerobic reduction processes e.g. at the production of biogas, at the precipitation of municipal sludges and at the anaerobic treatment of organically highly loaded industrial wastewaters.

With the development of FerroSorp[®] DG operators of mentioned systems are disposed a high active and economical reagent for the removal of hydrogen sulphide in the rotting respectively biogas plants.

Application

For the following application fields FerroSorp[®] DG is applicable particularly advantageously:

- production of biogas:
 - fermentation of waste
 - anaerobic dissipation of dung, poultry dung, stable litter and other agricultural waste-products
 - fermentation of renewable raw materials (rape, maize, sunflower etc.)
- precipitation of sludge in municipal waste-water purification plants
- anaerobic dissipation of sewages e.g. the food processing industry

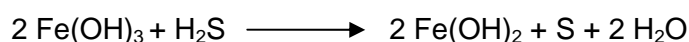
Technical data

Chemical designation:	ferric(III)-oxidhydrate
Formula:	FeO(OH)
Condition:	deep brown powder
Bead diameters:	0 – 0.5 mm
Bulk density:	800 ± 50 g/dm ³
Ferric contents:	360 g/kg

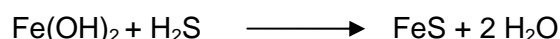
Procedure

The bonding of hydrogen sulphide in anaerobic processes by the addition of ferric hydroxide can be described by the following chemical reaction equations:

1. Reduction of ferric (III) hydroxide to dissolved ferric (II) hydroxide



2. Reaction of ferric (II) hydroxide with hydrogen sulphide under formation of an insoluble, black coloured ferrous sulfide





The formed ferrous sulfide is a hardly soluble compound. Therefore, it is possible to reduce the hydrogen sulphide nearly to 0 ppm in the rot or biogas.

Application

The addition of FerroSorp[®] DG has evenly distributed, so a concentration as constant as possible in ferric is adhered into the digester. In the case of biogas plants FerroSorp[®] DG can be added easily combined with the substrate. At other anaerobic sewage or sludge treating plants suitable locations for dosing are to select.

The addition of FerroSorp[®] DG should be volume proportionally. Sufficient mixing in the digester is essential.

The bonding of hydrogen sulphide is possible as well at mesophilic as thermophilic process management.

Transport and storage

FerroSorp[®] DG is a harmless product. There are no special regulations concerning storage and handling. Protect the paper bags against weathering. Opened packaging should be close again to prevent the absorption of moisture and contamination. Take care of direct UV-radiation (sun); it can destroy the packaging made of synthetic material.

Instructions for safety at work

Because of particulate matter by handling with the powdered substance a breathing protection mask, type PR 3, is necessary. Furthermore the hygiene regulations for handling with chemicals are valid.

Form of delivery

Paper bags, three-layer, 30 kg, 720 kg per pallet
Big Bags with bottom drain valve, 800 kg

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Important note:

The prominent details are based on practical experiences and correspond to today's level of the technological development.

The guarantee applies to constant and faultless quality of the deliveries. You do not free the manufacturer from examinations and of your own tests because of the wealth of possible influences at processing and application of our products. A legally binding assurance of certain qualities or the suitability for a concrete intended purpose cannot be derived from our details. Possible protective rights as well as existing laws and regulations have to be taken into account by the receiver of our products in responsibility of his own.