ODORFLO™

Odor Control Products

SNF FLOERGER®

ODORFLO™
odor control products

What is an odor

Odor is a sensation resulting from the stimulation of the olfactory organs. Everyone detects odor differently. The threshold of each odor can be ten to one hundred times higher from one person to another. Some detection apparatus can not determine very low concentration yet human noses can detect some odor molecules at these low levels.

In some countries there are laws to regulate the presence of odor in the air, but they are rarely applied.

Odor in WWTP

Municipal and Industrial wastewater treatment generates odors that can be strong, persistent and a nuisance to employees, residents, businesses and industries located near the wastewater treatment plant.

In a sewage plant, odors are generated throughout the process with different intensity. The main area where odor is created is, head of the works, clarifiers, digesters, aeration basins, lagoons and mainly sludge handling areas.

Odors that are generally associated with this process include hydrogen sulphide (H_2S), ammonia (NH_3), sulphur dioxide (SO_2), skatoles (C_9H_8NH), mercaptans (RSH), amines (RNH_2 or RNH) and indoles (C_8H_6NH).

The most important thing is to firstly identify the problem:
- Is this odor a problem of safety for operating staff?
- Does the odor problem affect work conditions for operating staff?
- Is the odor a problem for neighbouring buildings or does it affect environmental safety?

Do residents complain when the sludge is spread on landfill sites?

Depending on the answers to these questions, there are a number of alternatives, which can be offered to solve the problem.

How to decrease or eliminate an unpleasant odor ?

To treat odor problem SNF Floerger offers several solutions:

1 Neutralising agent - ODORFLO FLR

ODORFLO FLR is the SNF range of neutralising agents. This range is made from several products in different concentrations. Their purpose is to neutralize unpleasant odors to mask them with a pleasant odor. This is of particular benefit in the case of complaints from neighbouring areas to a works.

The main application for **ODORFLO FLR** is when the sludge is spread on landfill and local residents complain about the bad smell.

Be aware that for safety reasons, **ODORFLO FLR** must not be used if the odor is due to high levels of H2S.

2 Reactant - ODORFLO ACT

ODORFLO ACT is a range of compound which react with odor molecules. **ODORFLO ACT** includes specific catching agents for hydrogen sulphide (H_2S), amine and mercaptan (RSH) removal.

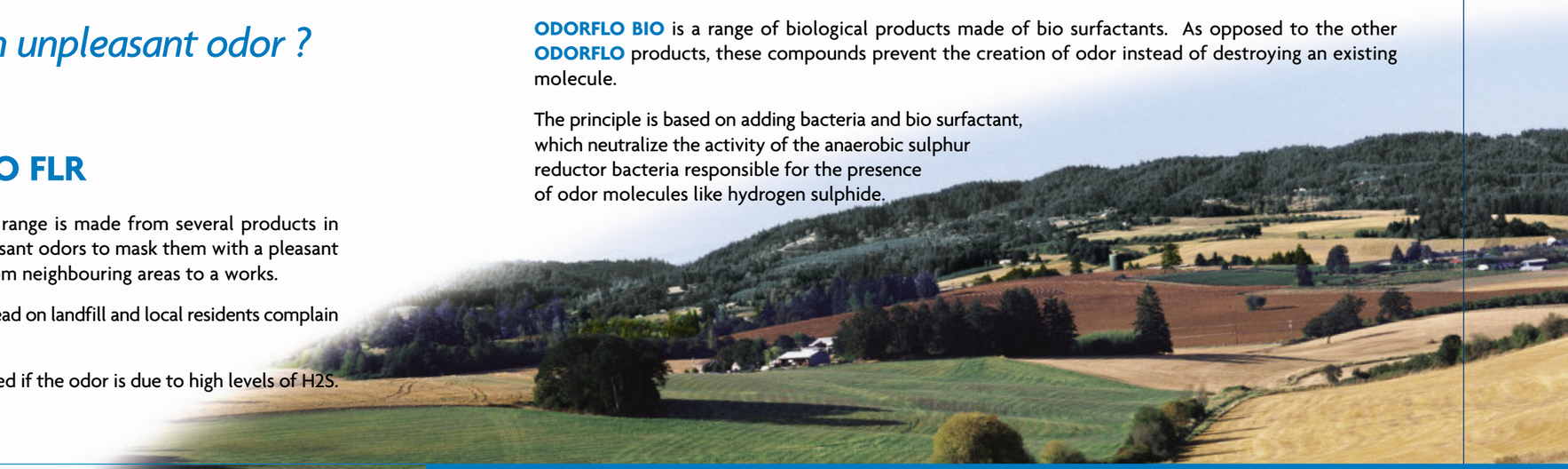
ODORFLO ACT trap hydrogen sulphide and mercaptan molecules according to the following reactions:

This range of products is particularly well adapted for high H_2S levels, in a confined atmosphere (covered sewage plants, dehydrating room and sludge disposal). A maximum of 5 ppm H_2S in air is allowed for an operator working 8 hours per day and only 10 ppm H_2S is the maximum limit for someone staying 15 minutes in such an atmosphere. Where the H_2S level is higher than this limit we recommend the use of **ODORFLO ACT** to react with hydrogen sulphide.

3 Oxydant - ODORFLO OXY

ODORFLO OXY is a range of oxidising agents. These products can rapidly react with molecule like sulphur compounds and ammonia. In case of non-identifying odor in a sewage plant **ODORFLO OXY** can be the right solution to your problem. Depending on their chemical structure, these products can oxidise all kinds of molecules responsible for the bad smell in an area.

4 Biological agent - ODORFLO BIO

ODORFLO BIO is a range of biological products made of bio surfactants. As opposed to the other **ODORFLO** products, these compounds prevent the creation of odor instead of destroying an existing molecule.

The principle is based on adding bacteria and bio surfactant, which neutralize the activity of the anaerobic sulphur reductor bacteria responsible for the presence of odor molecules like hydrogen sulphide.