Overview

Our know-how is your advantage
Sefar is a company with a long tradition of over 180 years in the production of fabrics, many used in the food and beverage processing industries. This vast base of accumulated experience and process know-how guarantees professional and innovative solutions.

Our service offering at a glance
- Laboratory analyses
- Laboratory filtration tests
- In field filtration testing
- Fabricated articles for customized solutions
- Broad selection of accessories for filtration, sieving and classifying needs
- Training for customers in tensioning of screening frames and the installation of filtration belts

Sefar and the starch industry
The extraction and processing of starch from agricultural commodities is one of the most important agro-industries worldwide. Using corn, wheat, potatoes, tapioca and rice as raw materials, about 49 million tons of starch is produced and processed annually.

While mainly used in the food and beverage industries, starch is also useful for a number of applications and industries including textiles, paper, plywood, adhesives and pharmaceuticals.

Sefar’s expert know-how can help to improve your specific process by helping you select the right filtration media for your application. Synthetic fabrics from Sefar are especially renowned for their precise pore/mesh sizes and their stringently controlled production processes. These factors guarantee that the fabrics can be reproduced time after time, having consistent filtration/sieving behavior plus mechanical stability. Since the production of the fabrics and the fabrication of the final filtration products are core competencies of Sefar, we are able to produce not only superior products, but also real solutions to improve your processes.
Starch and gluten dewatering

Sefar filters for rotary drum vacuum filters
Rotary drum vacuum filters are used in starch and gluten dewatering processes and in the polishing process of syrup as a so-called pre-coating filtration. But modern equipment alone is no guarantee for an optimal filtration process. The performance of a drum filter and the quality of the final product are highly dependent on the filter media used. Together with the machine type and cake discharging system, the concentration of the suspension and the particle size influences the choice of the filtration media. The precision of the pore sizes is important, especially early in the filtration process. Sefar has great experience in the optimization of filtration processes in the corn wet milling industry. Our experts will work to ensure that your final filter product is of the highest quality and performance.

Centrifuges – with Sefar always on line
The starch dewatering process is a trade-off between capacity and dryness of the product. Whereas drum and belt filters are continuous filtration processes, centrifuges are batch processes. Their ability to obtain a dryer product makes them an alternative to continuous systems. In cases where an output having the best possible dryness from the starch dewatering process is more important than a continuous process, liner centrifuges are a common solution. Sefar liners with their wide range of pore sizes and permeability are suitable for all separation tasks and are not subject to clogging. High-quality manufacturing eliminates common wrinkling and folding problems that contribute to shorter cloth lifetime. In some cases synthetic liners in centrifuges are even outperforming perforated metal plates in filtration performance and clogging behavior.
Polishing and sifting

Sefar filter press cloths
Oil is a valuable product won during corn/wet milling. Filter presses are often used in control filtration processes. Sefar produces filter cloths with a variety of fabrics. Whether using a durable multifilament or an efficient monofilament, Sefar can customize the right fabric for your process. The cloths are fabricated, ready-to-use in all sizes.

Sefar leaf filter covers
Within the starch industry, leaf pressure filters can be used in the syrup polishing process. Our goal is to supply ready-to-use filter covers, designed for easy installation, minimum downtime and maximum efficiency. The perfect fit of our filter covers over the leaves significantly reduces product loss and related problems.

Sefar screens
In the production of native starch and in the modification process of starch, many screening processes are applied. Technical proficiency, combined with application experience, allows Sefar to offer screen products with the best combination of performance and long service lifetime. As a weaver of fine screen mesh materials, Sefar can help you select just the right screen mesh for your application and provide you with screens that are carefully pre-tensioned before being bonded/welded.
Polishing and sifting

Sefar Sieving & classifying products
The required particle size for powdered products, like maltose and dextrose, is determined by the specific quality standard of the final product and can often be well below 50 μm. A precise grading degree is especially important for high value products. Sefar offers a broad product range of open mesh sieving fabrics – having mesh sizes from 5 μm upwards – for use in plansifters and other sieving machines. Our know-how, gained from many years in the field, covers the entire processing procedure – from the initial wet filtration through the final sieving and classifying of dry milling.

Centrifugal sifters are often used in place of plansifters in the starch industry. The mechanical stresses that the cylinders are subjected to in the sieving of dried products call for filter cloths that meet the highest standards. Sefar offers a broad selection of highly abrasive resistant sieving fabrics and state-of-the-art fabrication solutions.

Sefar tubes
In sweetener processing and alcohol production, tubes can be used for control filtration. Sefar offers many fabrics to optimize particle capture with flow through.
**STARCH REFINING**

**Starch modification process**
- Native starch slurry
  - Screening
- Starch treatment
  - Low dextrose solution
  - Low dextrose solution treatment
  - Unrefined corn syrup
  - Saccarification
  - Ultra-filtration
  - Evaporation
  - Carbon treatment
  - Dextrose syrup polishing
  - Ion exchange
  - Fractionation
  - Control filtration
  - Corn syrup = glucose syrup = dextrose syrup
- Modified starch dewatering
- Modified starch drying
- Modified Starch

**Sweetener process**
- Native starch slurry
  - Isomerisation
  - Yeast fermentation
  - Bacterial or yeast fermentation
  - Isomerisation
  - Yeast fermentation
  - Bacterial or yeast fermentation
  - Isomerisation
  - Yeast fermentation
  - Bacterial or yeast fermentation
- Isomerisation
  - Yeast fermentation
  - Bacterial or yeast fermentation
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  - Bacterial or yeast fermentation
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  - Yeast fermentation
  - Bacterial or yeast fermentation

**Products**
- Aminoacids
- Bio products
- Membrane Separation
- Distillation
- Filtration
- Alcohol