

EFFICIENT INDUSTRIAL  
WASTEWATER TREATMENT  
Optimise processes. Cut costs.  
Protect the environment.



INDUSTRY



**feralco**

ALL CLEAR.

# Feralco: Made in Germany – at home in Europe

The Feralco Group is one of Europe's largest providers of aluminium and iron-based coagulants for water treatment, with bases in many European countries. As a specialist in aluminium salts, Feralco Deutschland manufactures primary polyaluminium chloride and aluminium sulphate coagulants.

In addition to this, we also produce aluminium, iron and polymer combination products. Aluminium nitrate sulphates are our special innovation for water cycles, while flocculant aids round off our portfolio of chemical products for water treatment.

## Our name and logo

The company name, Feralco, is derived from:

fer | al | co

*Ferrum (iron) Aluminium Company*

Our logo combines the alchemical symbols for iron and aluminium:



WATER



SEWAGE



PAPER



INDUSTRY



EXPORT

## Locations

- Headquarters
- Production sites
- Offices



- SWEDEN:**
- Helsingborg
  - Kungälv
  - Sölvesborg
  - Vetlanda

- UK:**
- Grangemouth
  - Widnes

- GERMANY:**
- Nienburg
  - Duisburg
  - Ibbenbüren
  - Schwarzheide

- THE NETHERLANDS:**
- Sas van Gent

- FRANCE:**
- Colombes
  - Basse Indre
  - Saint-Clair-du-Rhône
  - Le-Pont-de-Claix

- SWITZERLAND:**
- Uster

- ITALY:**
- Millesimo
  - Livorno

- SPAIN:**
- Leaburu
  - Alegia
  - Valdemoro



## Industry needs water – Feralco takes care of it

Water plays a vital role in several stages of production, including for cooling, steam production, cleaning and as a solvent. Our decades of experience in water treatment mean that we understand the need for individual solutions that are specially tailored to the wide-variety of demands in these areas. Our products are mainly used in the treatment of fresh, process and wastewater – to produce the cleanest possible water in a cost-effective way.

## Raw materials for industry

In addition to their use in water treatment, our products – such as aluminium sulphate – can also be used as raw materials or primary products in the chemical and construction industries. Would you like to find out more about how our products can be used? Are you looking for research and development ideas? Get in touch!



*Aluminium sulphate is an essential aid, e.g.  
for hardening concrete in tunnel building*

## Our service – your benefits

Even the best product can only be truly beneficial if it is precisely tailored to your system and your processes. As such, our service always draws on the following individual components:

- › System appraisal
- › Laboratory screening
- › Trial run
- › Feasibility check
- › Cost/benefit analysis



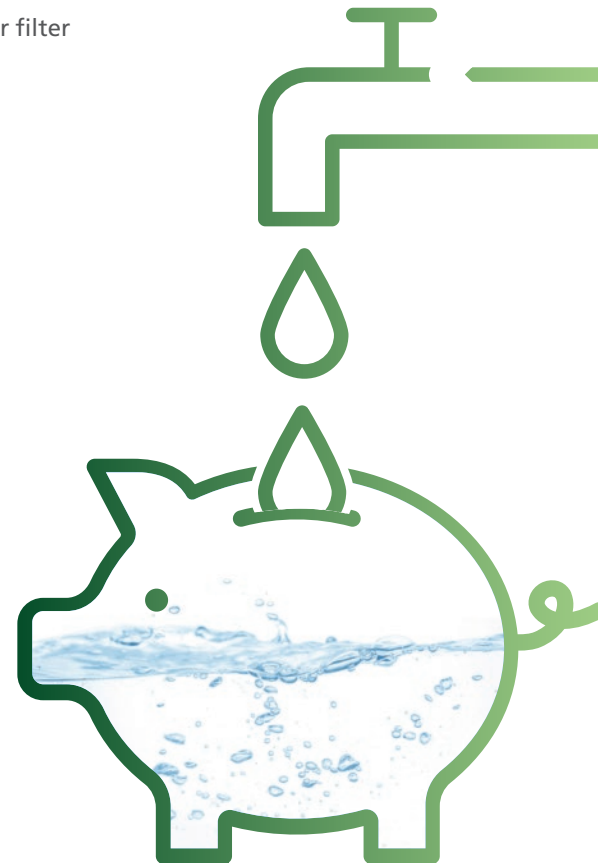
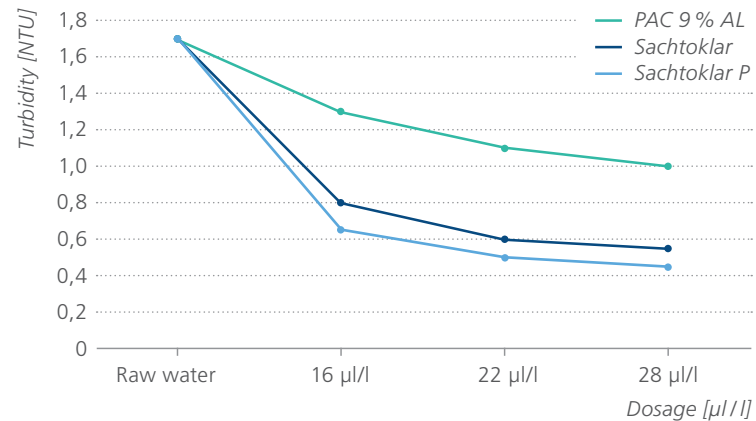
# Fresh water treatment – plenty of potential for savings

Fresh water treatment is essential for industrial operations, and the same products are often used for many years or even decades. But modern aluminium salts offer a range of advantages for flocculation.

The high proportion of hydroxide ions is responsible for a markedly lower reduction in pH value. At the same time, the oligomer and polymer structures form far larger and more stable flocs far faster than aluminium sulphate or standard PAC. Improved flocculation means rapid sedimentation, while also delivering improved turbidity (see graph). Filtering the flocs requires shorter filter backwash times with less backwash water.

## Reduction in turbidity

Feralco products compared





# Trouble-free wastewater disposal – that's our business

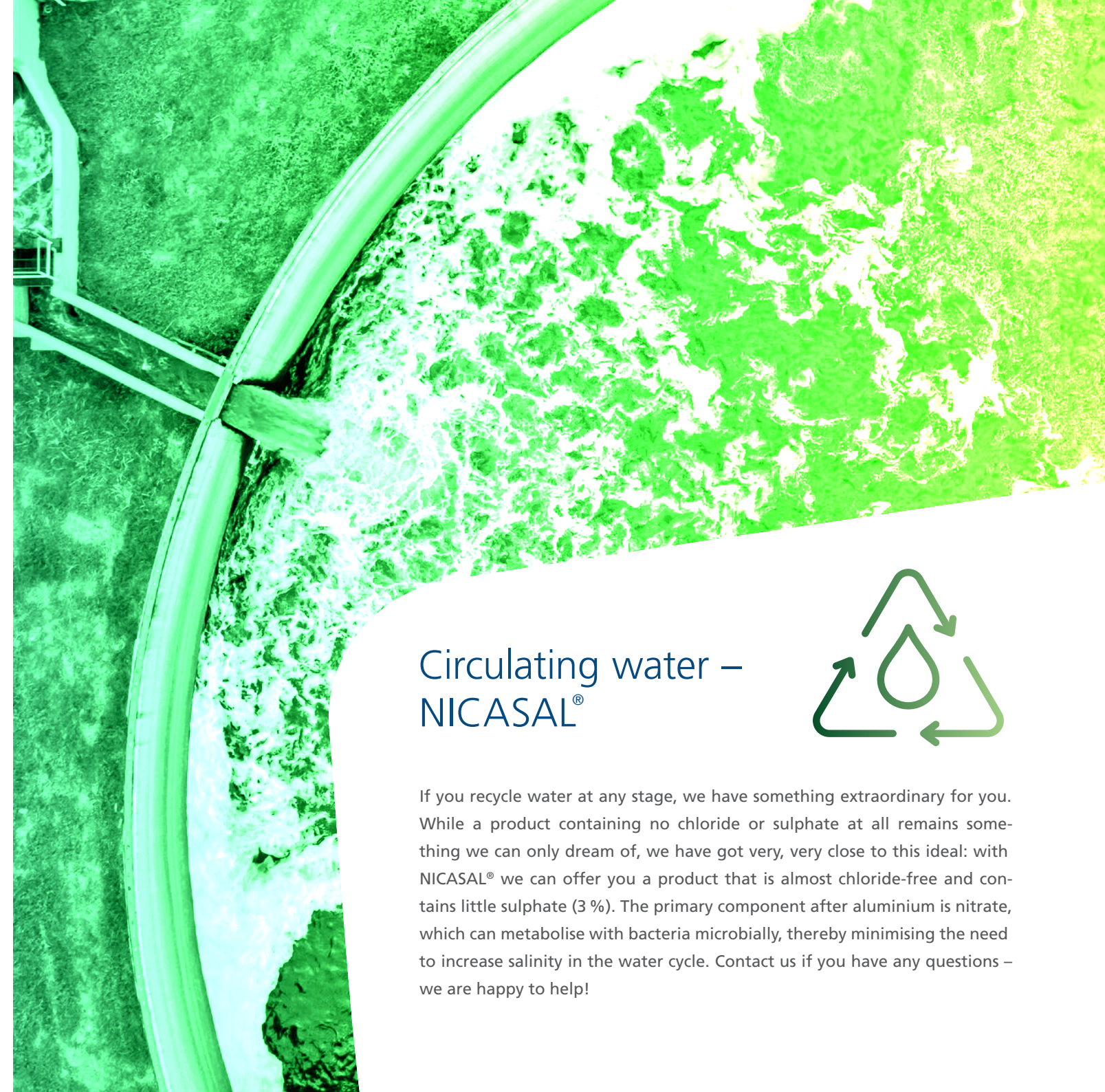
Our team is perfectly positioned if you need support with any challenge in relation to wastewater treatment. Perhaps your COD\* value or your sludge volume index is too high. Find out how we can help you adhere to limit values and save on costs.

Here are some of the benefits Feralco products can bring you:

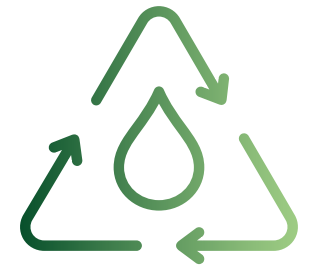
- ▶ Lower dosage
- ▶ Better elimination of turbidity and COD
- ▶ Larger, more stable flakes
- ▶ Shorter sedimentation times
- ▶ Lower pH reduction
- ▶ Lower salt content in wastewater
- ▶ Avoidance of bulking and floating sludge (filamentous bacteria)
- ▶ Low neutralisation outlay to raise pH
- ▶ Reduction of disposal costs due to less sludge



\*COD: Chemical oxygen demand



## Circulating water – NICASAL®



If you recycle water at any stage, we have something extraordinary for you. While a product containing no chloride or sulphate at all remains something we can only dream of, we have got very, very close to this ideal: with NICASAL® we can offer you a product that is almost chloride-free and contains little sulphate (3 %). The primary component after aluminium is nitrate, which can metabolise with bacteria microbially, thereby minimising the need to increase salinity in the water cycle. Contact us if you have any questions – we are happy to help!



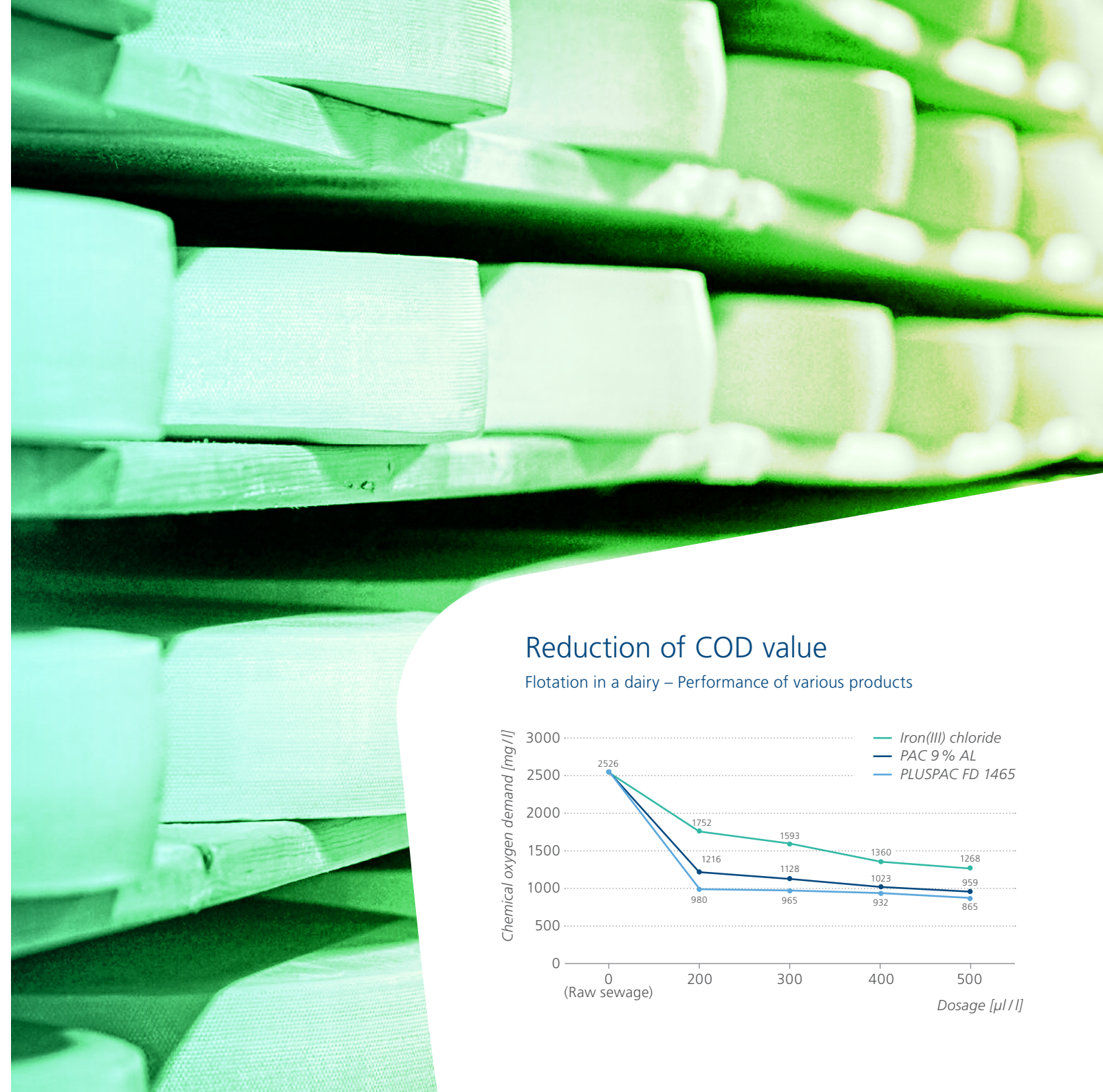
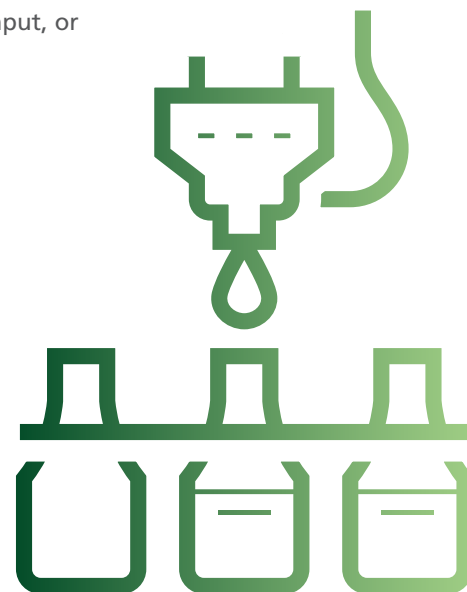
# Solutions for indirect dischargers

## Example: Dairy

The COD value is crucial in determining wastewater costs for indirect dischargers. Switching to modern aluminium salts means:

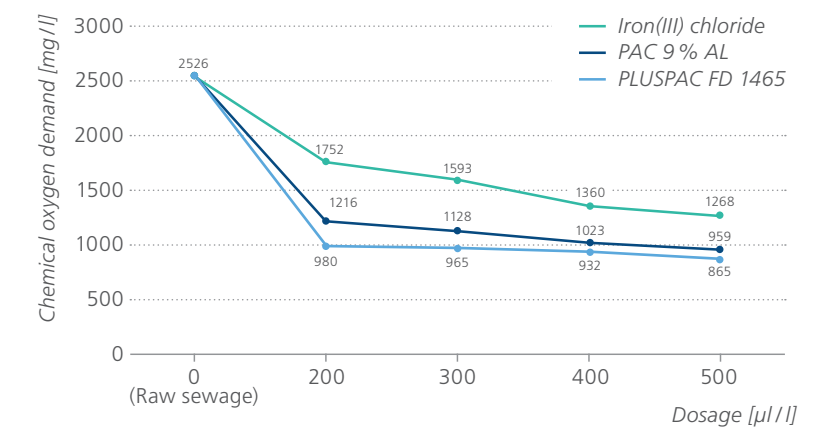
- ▶ Lower dosage
- ▶ Lower pH reduction
- ▶ Better cleaning performance (see graph on right)
- ▶ Increased throughput

This reduces the costs of chemicals that have to be used for neutralisation after flocculation. There is normally 30–60 % less chemical sludge, which reduces the costs of sludge disposal and use of flocculation aids. Better flotation performance and smaller volumes of sludge enable existing systems to increase throughput, or can reduce the volumes required in new plants.



### Reduction of COD value

Flotation in a dairy – Performance of various products





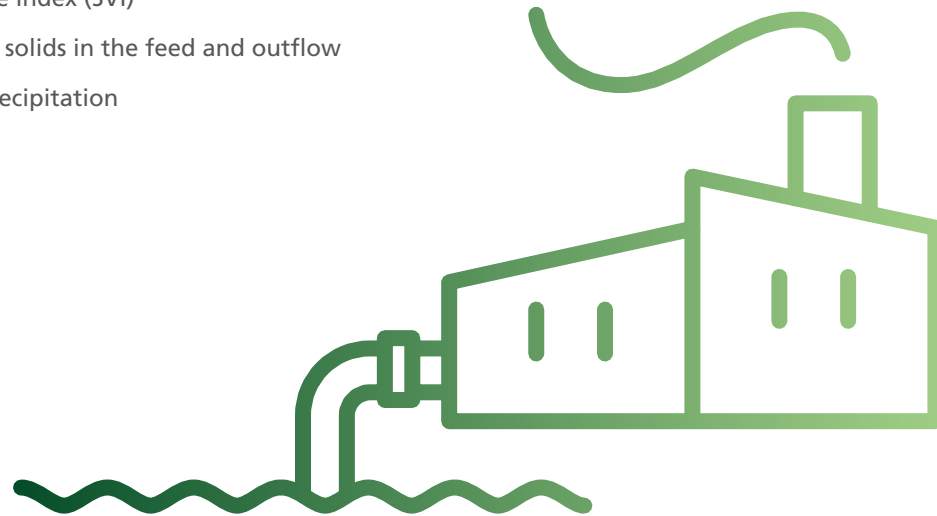
# Wastewater treatment for direct dischargers

Industrial sewage plants constantly face new, unforeseeable and inexplicable challenges. The wastewater is exposed to simultaneous biological, chemical and physical reactions that all impact upon one another.

Excessive development of filamentous bacteria gives rise to bulking sludge and scum, which can interfere significantly with the purification process. Our technical engineers develop measures to prevent the occurrence of filamentous bacteria and to deal with the phenomena in acute cases, as well as to economise on wastewater treatment costs.

## Your benefits:

- ▶ Avoidance of bulking sludge and scum
- ▶ Optimisation of sludge volume index (SVI)
- ▶ Reduction of fine colloids and solids in the feed and outflow
- ▶ Improvement in phosphate precipitation
- ▶ Optimising sludge treatment



## Feralco WaterLab

Feralco developed the WaterLab to support microscopic studies at sewage plants – a digital identification tool for filamentous bacteria, vorticella and bulking sludge.

It enables microscopic images to be analysed quickly and efficiently. At the same time, the WaterLab not only provides support with identification but also offers valuable information on process optimisation for biological wastewater treatment.

[www.feralco-waterlab.com](http://www.feralco-waterlab.com)





# Clear reasons why Feralco is your strong partner for water

## Product variety and expertise

Feralco Germany is one of the largest German providers of flocculants with the widest range of products. We have more than 40 years' experience in water treatment.

## Tailor-made solutions

By individually analysing your requirements we develop tailor-made solutions and adapt our products to your processes.

## Quality and reliable supply

Our four German production sites – with ideal central locations – and eighteen Feralco Group production sites across Europe guarantee an outstanding quality and reliable supply for our products, which is unique within the industry.

## Logistics and packaging

Regardless whether you are ordering small quantities to test our products or an entire shipping container – we will ensure that you receive the ideal supply and storage solution, e.g. big bag, IBC container or tanker.



WATER



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INDUSTRY



EXPORT



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## Feralco Magazine & LinkedIn

Check out our Feralco Magazine for interesting articles on new developments and innovations from our different departments. And why not subscribe to our LinkedIn feed to keep up-to-date with all the latest news?

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*Feralco Deutschland GmbH is a subsidiary of Feralco AB, which is based in Helsingborg in Sweden. The group is one of the leading producers of aluminium and iron-based chemicals in Europe. Its products are used in the drinking and wastewater sectors, in paper and in other industries.*

*Feralco AB is active across Europe, with sites in Germany, France, Great Britain, Italy, the Netherlands, Sweden, Switzerland and Spain. This guarantees fast delivery times, a personal service and excellent flexibility.*



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