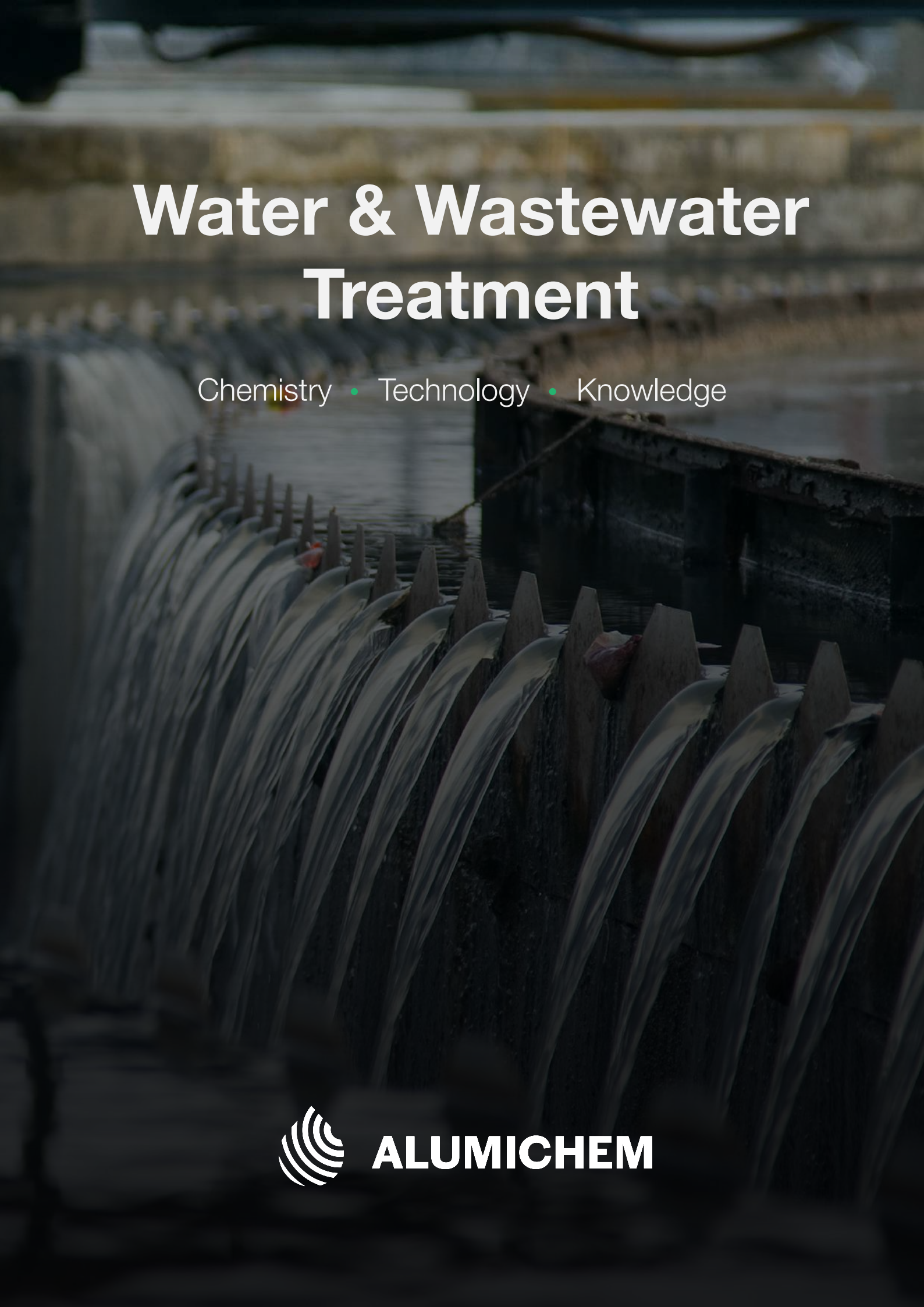


Water & Wastewater Treatment

Chemistry • Technology • Knowledge

ALUMICHEM

Your **partner** in **water treatment**

Alumichem's purpose is to deliver clean water solutions by combining our extensive knowledge and proprietary chemistry, with the latest technologies in the industry. Having more than 40 years of experience within the water treatment sector, we pride ourselves on being customer-focused and providing unparalleled technical service and support for our products.

About us

Alumichem is a committed partner helping municipalities industries, and distributors achieve optimal performance in their water treatment processes. We always utilize the best available technology and enable our customers to get the most out of their processes with environmentally friendly products.

Alumichem has headquarter and production in Denmark and offices in Canada, Belgium and Ghana.

We have a passion for helping our customers ensuring secure and fast delivery of products with highest quality and service.



Meeting your stringent discharge requirements

The requirements for wastewater treatment and discharge are becoming stricter all around the world.

By partnering with Alumichem, you are guaranteed to comply with current environmental legislations and you will receive peace of mind that they can be adapted to any future requirements.

Our services

Let us help you maximize performance and minimize risk by supporting you before, during and after start-up.

- Start-up and commissioning
- Educating distributors
- Installation and ongoing technical support
- Chemical testing and optimization
- Our experts guide you to the best solution
- Upgrade of existing facilities
- Operator training

Sustainability

At Alumichem, we are committed to promoting sustainable development in the world. We do this by designing and providing innovative, efficient and sustainable solutions and products for improving water quality.

We are actively working to meet several UN Sustainable Development Goals (SDG).



We are ISO 9001 and ISO 14001 certified!
Our strict Environmental and Quality Management System enhances our ability to develop, manufacture, and deliver solutions that comply with customer demands as well as regulatory and legal requirements.

Innovation partnerships

Alumichem has many years of experience in developing new products and processes and offers this as a service for our customers and partners.

At Alumichem, we have the competencies, the facilities, and the supply chain, to assist our customers in taking their product or process to the next level.

Production and logistics

Alumichem is a leading Nordic producer and manufacturer of functional aluminates, serving customers all over the world.

Alumichem, has since its foundation in 1991, been developing and producing high-quality functional aluminates, for use in water purification.

State-of-the-art production facilities and efficient logistics, capable of meeting any customer need in terms of formulation and order size.

Alumichem is your partner and long term collaborator, to fulfill the demand for on-time deliveries at a competitive cost level.

- Strictest quality and management system
- ISO 9001 & ISO 14001 certified
- Produced according to EN 882 and EN 17034
- NSF international certification
- Closed production system – no waste
- Any size shipment - Isotanks, IBC, bulk truck, or pails
- Shipment within 5 days from order
- Just-in-time delivery

AluSAL – Sodium Aluminate
AluPAL – Potassium Aluminate
AluPAC – Poly Aluminium Chloride

- Gives high purity and quality of water
- Excellent coagulation, flotation and sedimentation
- AluSAL & AluPAL increases alkalinity
- Excellent removal of phosphor
- Minimal chemical sludge
- Low transportation cost



ISO 9001
ISO 14001
Management system Certification

Highest creditworthiness
© Bisnode 2021

AluACH – Aluminum Chlorohydrate

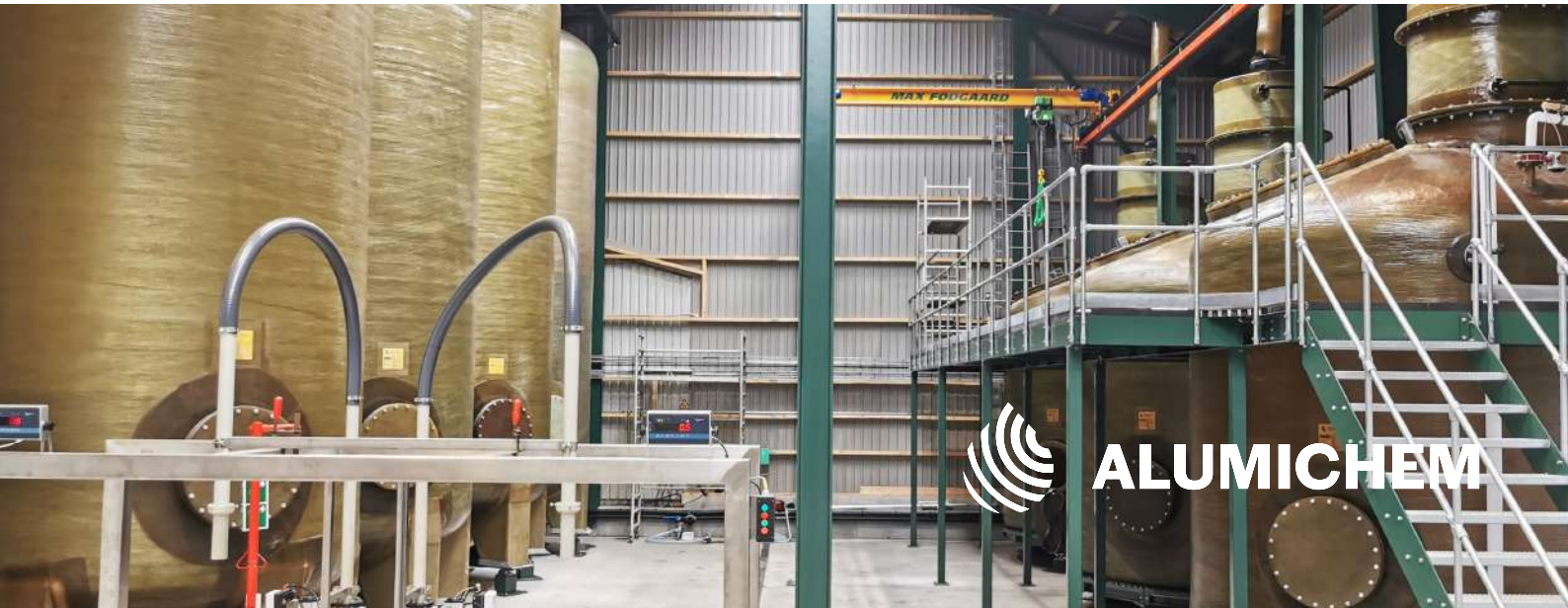
AluACH is an extremely powerful and versatile product for drinking water and industrial wastewater applications, as it delivers performance across a wide range of process and water conditions.

AluACH has a high cationic charge which makes it very effective at removing even very small particles.

In addition, it creates strong flocs that dewater well and leads to reduced levels of chemical sludge.

AluBLEND

Powerful blends of AluACH /AluPAC and organic coagulants.



Drinking water treatment

Alumichem provide complete solutions for purifying water into high quality drinking water.

Alumichem offers a wide range of powerful coagulants and filter material, like activated carbon, that help produce high-quality drinking water, whether the source is ground water or surface water.



There are strict requirements for the treatment of water that is to be used for drinking water. At Alumichem we have developed effective products and technologies that ensure your water lives up to these requirements and is produced in the most cost-effective way.

Our products include:

- AluPAC Poly Aluminium Chloride PAC
- AluSAL: Sodium Aluminate
- AluACH: Aluminum Chlorohydrate ACH
- AluBLEND: Specialized proprietary formulations of coagulant blends
- Development of application specific formulations
- NSF Certified

From surface water to drinking water

In many areas of the world, surface waters are the main source of drinking water. In order to purify the water to drinking water standards, the most common process is coagulation followed by a filtration step and disinfection.

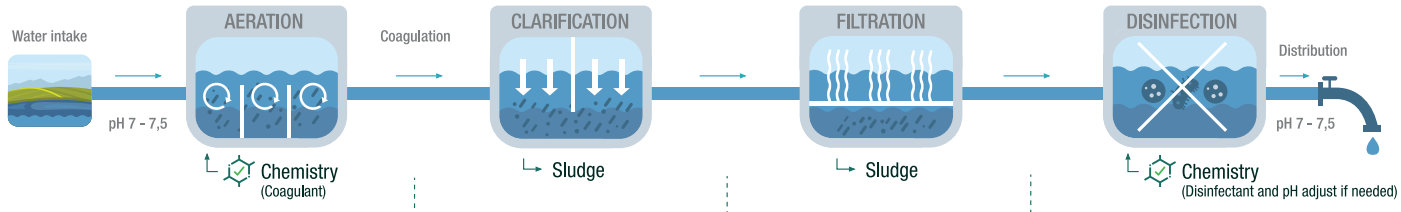
In the coagulation step, a coagulant is added to the water to coagulate particles and precipitate pollutants. In this way suspended solids, color and certain dissolved solids are coagulated into flocks that can be removed from the water by sedimentation, flotation or in a membrane filtration step.

After removal of the coagulated solids, the water will pass a filter before being disinfected with a disinfectant such as calcium hypochlorite, chlorine gas or chlorine dioxide.

Our specialized AluBLEND coagulants optimizes the coagulation and separation step. This results in improved water quality and prolonged filter runs, increasing throughput in the plant.

Alumichem offers a NSF Certified range of more than 30 enhanced AluBLEND coagulant products.





ALUMICHEM SOLUTION	- AluBLEND Coagulants - pH 7 - 7,5 (no change)	- pH 7 - 7,5	- pH 7 - 7,5	- Disinfection by Cal Hypo or ClO_2 - No need to adjust pH with lime / alkalinity
TRADITIONAL SOLUTION	- Aluminium sulphate - pH 6	- pH 6	- pH 6	- Lime 20 % of alum dosing needed to adjust alkalinity / pH - Disinfection by Cal Hypo or ClO_2
BENEFITS OF ALUMICHEM SOLUTION	- Ready-to-use products - Significantly lower dosing - Easy mixing into water - No dosing line blockages - No handling of solid chemicals	- Better coagulation - Better settling - Better quality settled water - No pH drop - Better removal of organics - Sludge is easier to dewater - Less sludge / chemical sludge redused	- Longer filterruns - Fewer backflushing increase throughput - Better quality filtered water - More water produced from same volume intake water	- Lower desinfection by-products due to better organic removal - No need to adjust pH unless water source is acidic - No scaling as lime is eliminated



Wastewater treatment

Alumichem is a leading supplier and manufacturer of chemicals and complete solutions for wastewater treatment.

Alumichem delivers integrated wastewater treatment solutions. As experts in both chemical treatment and system design, we can ensure that your treatment processes are working together in the most optimal way to keep your plant in compliance at the lowest cost.

Alumichem have extensive knowledge and treatment programs for both Chemical wastewater treatment and Biological wastewater treatment.

Alumichem serve many industries such as:

- Municipalities
- Food & Beverage
- Pharma
- Aquaculture
- Production industry
- Automotive
- Pulp & Paper
- Mining
- Oil & Gas

We produce our own range of chemicals as well as supply products from world leading suppliers.

Our products help precipitate dissolved solids, coagulate suspended solids, improve clarification, dewater or thicken sludge, control foam, and smell etc.

Our product range include:

- Organic and inorganic coagulants
- Enhanced coagulant blends
- Biopolymers
- Polyacrylamide polymers
- Foam inhibitors, odor control agents and H2S scavengers
- Heavy metal precipitants





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Industrial water treatment

Alumichem provide complete solutions, that consists of the essential chemical products, equipment, and the required services.

Boiler water treatment

The most critical parameters for a steam generating system is heat transfer and effective steam production. These parameters are influenced negatively by deposits and corrosion.

Alumichem offers an innovative program, that protects the entire steam producing system. The program is built around a combination of chemicals, equipment, monitoring and data analysis, which ensures that the steam generating system is effectively protected against corrosion, deposits, and other potential problems. Alumichem treatment program ensures the most effective protection against scale formation and corrosion improving reliability and efficiency of your system.



Cooling water treatment

The cooling efficiency in a system will depend heavily on the insulative effect of the heat transfer surfaces (deposits, tube, biofilm etc.) and in cooling towers, how well the tower is cooling the water.

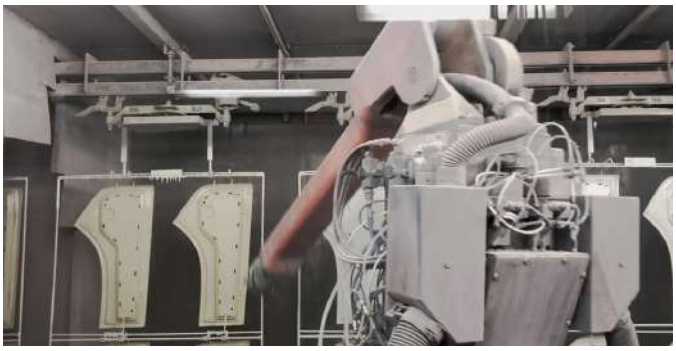


Alumichem cooling treatment programs combines effective chemical treatment with monitoring, data analysis, and field service to keep the sy stem running optimally. This means selecting the right treatment approach for using available water sources. Generally, a near neutral pH or slightly alkaline treatment programme can be chosen. Both can be effective, but require a different approach.

Paint detackification

Alumichem offers total water treatment solutions for paint detackification for automotive and industrial paint systems. Each Industrial process or paint system is unique in both manufacturing and operation, requiring a unified mechanical, operational and chemical approach to optimize performance.

We have extensive experience working on every type of solids removal program and we have developed chemicals that not only provide detackification but also denature and change the physical activity of the organic solid in the systems.



Aquaculture effluent treatment

Aquaculture has significant potential in helping provide a healthy and sustainable protein source for future populations. Alumichem delivers customized turnkey system solutions to treat intake water and effluents from fish farms. By treating the discharge water it can be used as a potential fertilizer supporting the circular economy.

Food & beverage

The food and beverage industry generates a large amount of wastewater, which must be treated effectively before it is released into the environment. Alumichem works closely with clients in the food and beverage industry to ensure that their wastewater treatment systems are operating efficiently, effectively, and in compliance with local regulations.



Industrial cleaning

Alumichem have developed a full range of cleaning products and services to optimize your plant operation.

Membrane cleaning

Membrane systems are used in many types of applications, with very different cleaning challenges. Alumichem's range of membrane products help clean your system and prolong intervals between cleanings. Our product range includes products speci ficly developed for the most demanding applications, including desalination, food & beverage, pharma, MBR etc.

For any type of membrane and any type of application – if there is a cleaning challenge, Alumichem has the right cleaning solution.

Our product range include:

- CC KLEAN series alkaline, acidic and enzymatic membrane cleaner
- MBR KLEAN series specifically developed for MBR systems
- DISPERSE series antiscalants
- BIO GUARD series membrane compatible biocides

Cleaning In Place (CIP)

Alumichem is providing Cleaning in Place (CIP) solutions, a method of cleaning production equipment without initial disassembly, for the food and beverage processing industries.

To ensure the highest product quality while streamlining your cleaning processes, Alumichem conducts a survey and offers tailored recommendations based on your plant, products, and other factors. The goal of these optimizations is to minimize CIP downtime, as well as conserve resources such as water, energy, and temperature.



Research & innovation

With years of experience in developing new products and processes we can drive your innovation forward in a collaborative partnership.

At Alumichem we are masters of innovation and together with industry experts we deliver custom made solutions to fulfill your exact specifications.

Whether you are developing a new product, a new process, or want to optimize an existing one, we can help drive your innovation forward in a collaborative partnership.

Some of the areas where we offer support are:

- Product and technology development & design
- Product prototyping & testing
- New processes development
- Engineering support
- Optimize chemical formulations
- Contract manufacturing

Innovation projects

Sustainable utilization of marine resources

In collaboration with several partners across Europe, Alumichem is currently working on the Marigreen project for sustainable utilization of marine resources to foster green plant production in Europe. Significant amounts of fertilizers applicable in organic growing are required to achieve 25% organic farmland in EU by 2030, as proposed in the F2F (Farm to Fork) strategy.

The Marigreen project will valorize residual materials from aquaculture (BLUE sector), of which many are currently poorly utilized, by treating them with appropriate technology and applying in agriculture (GREEN sector). The project includes a unique approach to utilizing organic fish waste from aquaculture to speed up approval for use in growing media. Additionally, it includes research on using biochar, which improves soil, after it is impregnated with extracts of “BLUE” materials to provide nutrients and other beneficial compounds for agricultural soil.



Groundwater remediation

Alumichem is proud to collaborate with several large Danish players to develop a green and cost-effective method for in situ remediation of chlorinated solvents present in contaminated soil and groundwaters. Biochar and green rust are the main ingredients of this low cost and environmental friendly technology.



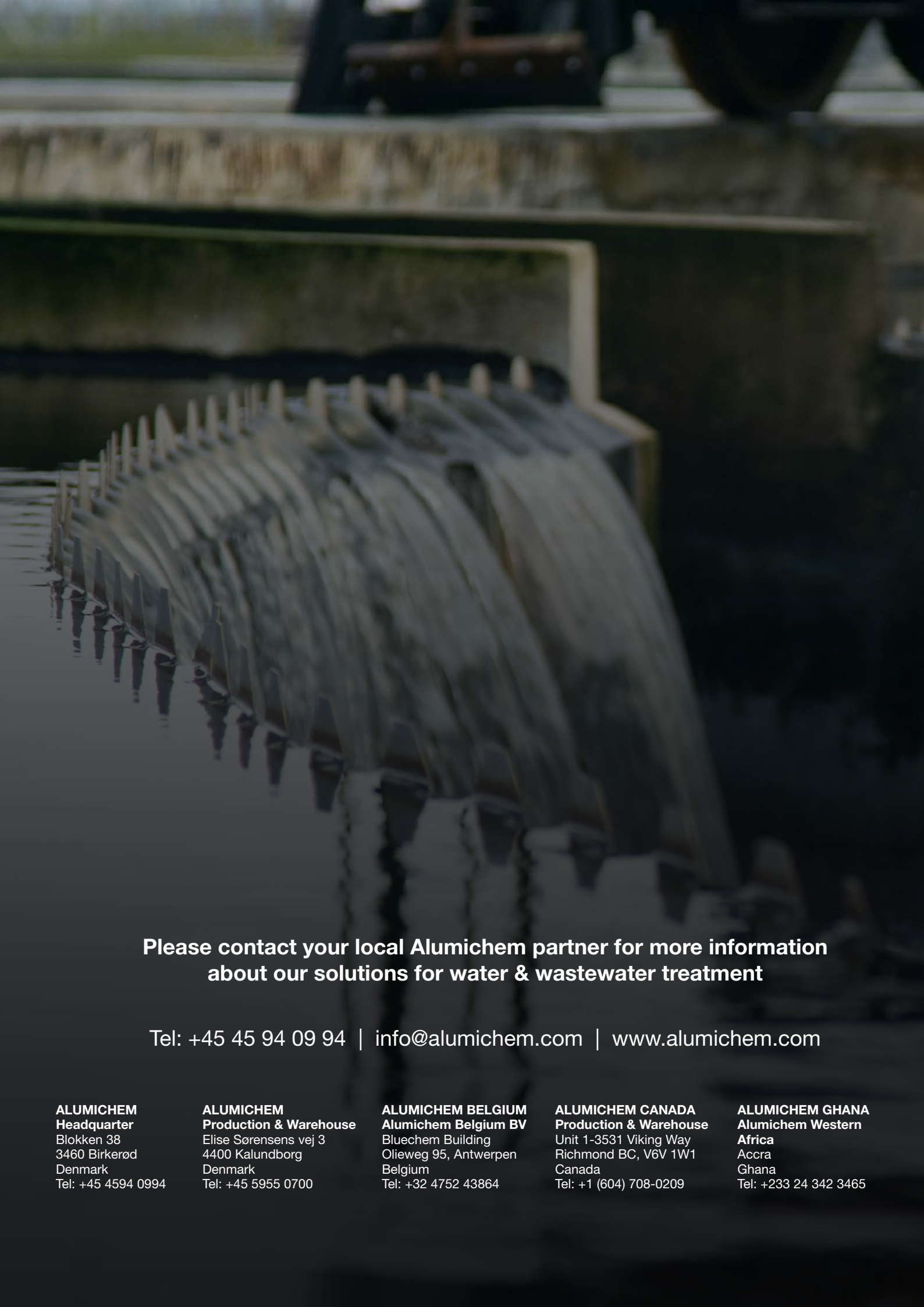
Securing clean drinking water in Ghana

Access to safe drinking water is a growing challenge in Ghana. The majority of water sources are highly polluted due to mining, industrial and agricultural activities. At Alumichem, we are deeply committed to advancing the UN Sustainable Development Goals and aspire to have a transformative impact on Goal 6: clean drinking water and sanitation.

We are improving the quality and access to safe drinking water in Ghana by producing and supplying high quality products and services for water management.



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Please contact your local Alumichem partner for more information about our solutions for water & wastewater treatment

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