

**kemira**

Where water  
meets chemistry™



KEMIRA SUPERFLOC® – FLOCCULANTS AND ORGANIC COAGULANTS

SOLVING DIVERSE CASES OF  
LIQUID-SOLID SEPARATION

# OPTIMIZING WATER TREATMENT THROUGH LIQUID-SOLID SEPARATION

For each water treatment process, there are varying characteristics that bring up different kinds of challenges to the municipalities and industries dealing with the water. Water quality, volume, substrate variability, cost optimization, yield expectations, treated water specifications and regulatory compliance requirements are all factors that influence the process as well as the treatment solution.

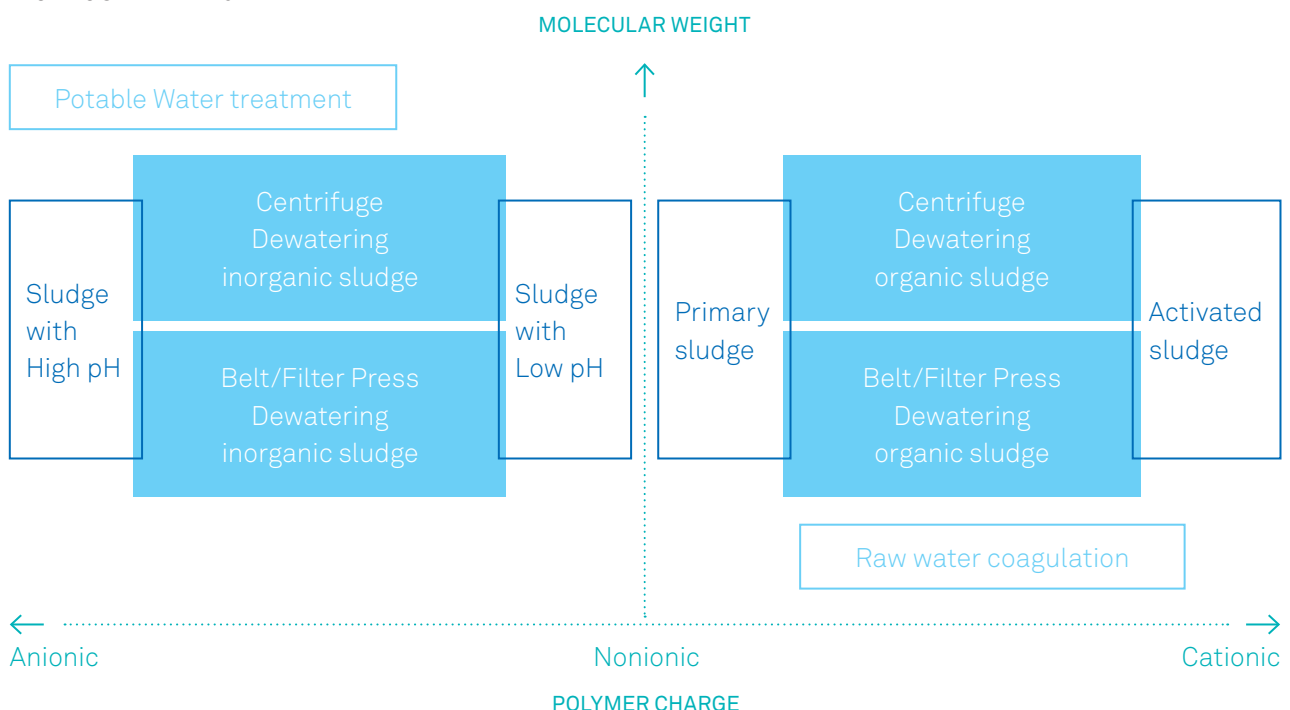
Liquid-solid separation is a key application. With the expertise we have at Kemira, we can support companies and municipalities in finding the right kind of technical approach, and the correct organic chemistry that suits the approach. Different equipment requires different molecular weights within flocculants, and even variations in sludge types require different types of charges to treat it. We offer a diverse range of products to solve all kinds of situations.

To solve a variety of situations and to improve the total cost of ownership from the sludge dewatering process, Kemira has developed the all-new Superfloc XD range of high-performance products.

## EMULSION OR POWDER?

- Emulsions are easy to handle, sleek and non-hazardous. Kemira's proprietary emulsion breaker and carrier system result in reduced polymer settling rates and low formation of insoluble material. The anionic charge densities of our flocculant emulsions range from 0–100% with exceptionally high molecular weight.
- Powder provides a high content of active polymer. Our special sieving process eliminates dust fines thoroughly and reduces human exposure.

## MOLECULAR WEIGHT



# WE SUPPORT THE TREATMENT PROCESS WITH OUR COMPREHENSIVE PORTFOLIO

To answer the challenge in sludge treatment we have a broad range of products in many chemical variants. The portfolio is made possible with our expertise in manufacturing and chemical structuring. The broad range ensures we can meet diverse and demanding process requirements.

## CATIONIC FLOCCULANTS

We produce cationic polyacrylamides in emulsion and powder form that are particularly effective in:

- primary clarification
- sludge thickening
- sludge dewatering

## ANIONIC FLOCCULANTS

We produce anionic and nonionic polyacrylamides with anionic charge density ranging from 0-100% that are class-leading in applications such as:

- raw water clarification
- fermentation by-product recovery
- sugar juice clarification
- process water recycling

## ORGANIC COAGULANTS

We offer a range of liquid organic coagulants of the highest industry-quality.

- Polyamines often replace or reduce the use of inorganic coagulants for turbidity reduction in process or wastewater streams. They are particularly useful in areas of biological waste processing and fermentation applications.
- Polydiallyldimethyl ammonium chloride (PolyDADMAC) is often used in filtration applications or in conjunction with our flocculant products. These polymers are highly effective in many water treatment clarification processes. It can also be used in combination with our flocculant and coagulant products to lower overall treatment costs.
- Melamine formaldehyde polymer resin and polydicyandiamide polymer resin are highly effective in color removal and oily waste separation in industrial processes.

Working together with Kemira, the second biggest polymer producer worldwide, offers the following benefits:

- very diverse and highly competitive offering for anionic and cationic flocculants and organic coagulants.
- versatile range of chemical structures and molecular weights up to “ultra-high”.
- independency from the volatile raw material market due to monomer backward integration.
- reliability and cost-efficiency are enabled by our manufacturing network and supply chain.
- all our flocculants are free of nonylphenol and contain less than 1,000 ppm of acrylamide residuals as a standard.



# DIVERSE PORTFOLIO FOR A WIDE RANGE OF CASES

	CATIONIC PAM	CATIONIC POLYAMINE	CATIONIC DADMAC	ANIONIC PAM	NONIONIC PAM	DICYANDI- AMIDE	RESIN AMINE
<b>RAW WATER TREATMENT</b>							
Clarification	•	•	•	•	•		
Cold lime softening	•	•	•	•	•		
Filtration		•	•	•	•		
<b>PROCESS WATER TREATMENT</b>							
Pigment beneficiation		•	•	•	•		
Fermentation by-product recovery	•	•	•	•	•		
Sugar juice clarification		•		•	•		
Metal recovery and re-use		•	•	•	•		
Metal removal		•	•	•	•		
Protein recovery	•	•		•	•		
Water recycling		•	•	•	•		
<b>WASTEWATER TREATMENT</b>							
API separator	•	•	•	•			
Air floatation	•	•	•	•			
Decolorization						•	
Detackification							•
Dye waste treatment							•
Oily waste	•	•	•				•
Primary clarification & CEPT	•	•	•	•	•		
Tertiary treatment		•	•	•	•		
Phosphate removal			•				
Hydrogen sulphide reduction / odor control			•				
Sludge thickening	•	•	•	•	•		
Sludge dewatering	•	•	•	•	•		

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