



DEFOTEC Process Chemicals

Paper Solutions

**Defoaming agents, deaerators, flocculants,
special cleaning agents, pH stabilizer**



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Paper industry

Today DEFOTEC is one of the leading suppliers of process chemicals for the paper industry.

With our innovative techniques and consistent customer-orientation we have established ourselves on the market for years – worldwide.

For good reason: We enhance our know-how in the paper industry through cooperation with various partners in the areas of research and development, analytics and product safety. Thanks to this close cooperation, we know the special and current challenges of the paper industry and develop tailor-made products.

Our proprietary process technologies, such as our Online-Monitoring-Tools for water hardness (DEFOTEST dH Plus) and foam height (DEFOTROL) have been successfully implemented in recent years.



Process chemicals for the paper industry

We also offer a wide range of process aids for the paper industry:

- Defoamer and deaerator to prevent foam and air in the system
- Flocculation aids based on polyacrylamide for an improvement in the drainage retention behavior
- Special cleaner for paper machines for a better quality of the end product
- pH stabilizers for higher availability of paper machines

The products are available in different charge densities, molecular weights and different structures.

The corresponding **DEFOTEC** dosing equipment is available for the use of the products.

Paper industry and wastewater treatment

Defoaming agents and deaerators

Dynamic processes in the paper industry, especially in the area of admission for process aids with food contact, place high demands on the defoaming agents and deaerators used in paper production.

DEFOTEC, as one of the leading suppliers of defoaming agents, can fall back on more than 20 years of expertise. With new developments constantly adapting to requirements, defoaming agents of excellent quality have been developed with great success on the market in recent years.

Not only the requirements of the paper machine were taken into account, but also those of the downstream treatment plants, some of which have different but no less demanding product specifications.

The **DEFOSPUM®** product range supports the individual production steps of paper production by preventing the formation of foam and air. Only by using effective defoaming agents and deaerators the paper machine can reach its full potential.

Foaming in downstream sewage treatment plants can also lead to undesired effects. Here it is often necessary to achieve a precise balance between the defoaming and deaerating effect. **DEFOTEC** offers a broad portfolio of suitable products for this purpose.

Product	Area of application	Application advantages
DEFOSPUM® PWW 90	Paper machine	Low consumption; excellent deaerating effect; good defoaming effect
DEFOSPUM® PWW 74	Paper machine/ sewage treatment plant	Low consumption; very good defoaming effect; good deaerating effect; very good in systems where oxygen loss is undesirable
DEFOSPUM® S664	Pulp production	Very good defoaming effect with low consumption
DEFOSPUM® DEV 1849	Paper machine/ sewage treatment plant	Silicone-based defoaming agent with excellent effectiveness and low consumption; for areas where silicone-based defoaming agents can be used
DEFOSPUM® PHT 100	Sewage treatment plant	Very good defoaming effect with low consumption

Paper industry and wastewater treatment

Flocculation agents

Flocculation agents are used wherever solid-liquid separation is required. The polymers used achieve an acceleration or improvement in the sedimentation or flotation of suspended solid particles.

Flocculation agents are used in the paper industry to improve the dewatering and retention behaviour of the paper as well as for the purification of industrial and municipal waste water in sewage treatment plants.

A significant increase in the dewatering behaviour of thickened sludge is achieved by means of a static mechanical dewatering process. During flocculation, finely distributed particles are bound by the so-called macromolecules to form larger flocs and can thus be better separated from the water medium. Most of the products in use are organic, synthetic, high molecular weight and water-soluble polyelectrolytes based on polyacrylamide.

Many dewatering units such as belt presses, centrifuges, decanters or purgomats can hardly be operated without the addition of flocculation agents or only function to a limited extent and with a considerable limitation in performance.

DEFOTEC offers a complete portfolio of polymeric flocculation agents that differ in charge strengths and molecular weights. They are available in different forms (granulates, emulsions, oil-free dispersions) and can be supplied in different packaging sizes according to requirements and application. Our competent and experienced staff will be happy to advise you here.

Product	Chemical basis	Molecular weight	Viscosity (cps)	Form	Area of application
DEFOFLOC® CL 5200 CT	Polyacrylamide cationic	High	1200	Liquid	Flotation
DEFOFLOC® CP 9355	Polyacrylamide cationic	Medium	550 (5g/l)	Powder	Retention
DEFOFLOC® AP 9541	Polyacrylamide anionic	High	1820 (5g/l)	Powder	Dual system
DEFOFLOC® CL 6610	Polyacrylamide aqueous dispersion	High	25-600	Liquid	Dewatering
DEFOFIX MCA 50	Polyamine	Medium	650-1000	Liquid	Contaminant fixing agent
DEFOBOND AL 6606	Polymer anionic	-	8000-12000	Liquid	Strength agent

Paper industry

Special cleaning agents for paper machines

Deposits in paper machines disrupt the production process of paper and cardboard – sometimes massively. These deposits occur throughout the paper production cycle.

Often, these deposits loosen as soon as they reach a certain mass and then lead to cracks. However, smaller deposits also reduce the quality of the end product, as they lead to holes or stains in the paper.

The special cleaning agents from our **DEFOCLEAN®** product range clean the entire machine circuit and clear a large amount of deposits and impurities.

These special formulations make it possible to run higher paper qualities and avoid tears, holes and stains.

Produkt	Area of application	Application advantages
DEFOCLEAN® OTV	Paper machine	Cleaner based on orange terpenes in diluted form; very good cleaning performance; ready to use
DEFOCLEAN® OTV konz.	Paper machine	Cleaner based on orange terpenes in concentrated form; easy emulsifiability; very good cleaning performance
DEFOCLEAN® OTR	Paper machine	Cleaner based on orange terpenes and dipentenes in diluted form; very good cleaning performance; ready to use
DEFOCLEAN® OTR konz.	Paper machine	Cleaner based on orange terpenes and dipentenes in concentrated form; easy emulsifiability; very good cleaning performance

Paper industry and waste water

pH stabilizer

Not all waters are equal to one another. In many industries, water is the most important component of the entire production process and is subject to high quality requirements.

DEFOTEC offers the opportunity to optimise production processes by raising the pH-value and simultaneously reducing costs with the product **DEFOKALK®**.

In the paper industry, experience shows that microbial activity is efficiently reduced, which leads to fewer deposits in the machine cycle and thus to higher availability of the paper machine.

Furthermore, **DEFOKALK®** reduces the water hardness in a targeted manner, so that other chemical additives can achieve a better effect.

Odour emissions are also significantly reduced by binding organic acids. Waste water treatment plants also benefit from the use of **DEFOKALK®** through the improved control of anaerobic and aerobic processes in water treatment.

Product	Area of application	Application advantages
DEFOKALK®	Paper industry, waste water treatment	Reduction of deposits by lowering the microbial activity; improved effectiveness of additives by reducing water hardness; reduction of odour emissions by binding organic acids

Contact

DEFOTEC offers a product portfolio of well-established and innovative products, intensive advice and reliable service.



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