



Färber & Schmid
Chemie · Technik

Efficient Wastewater Treatment in Flexographic Printing

What is Flexographic Printing?

Flexographic printing is a modern relief printing process primarily used in the packaging industry. Typical applications include flexible packaging, labels, cardboard, films, and corrugated board. Depending on the ink system and substrate used, process-related wastewater is generated, which must be properly treated before being discharged into the sewer system.

Treatment of Flexographic Printing Wastewater

Wastewater from flexographic printing typically consists of inks, dispersions, and various additives. To reliably remove these components, a reaction separating agent or flocculant is added to the wastewater. By adding this treatment agent, the contaminants are destabilized and precipitated. The resulting particles form sludge, which can then be separated from the clarified phase through filtration. Proper treatment of flexographic wastewater is essential to ensure compliance with regulatory requirements, as well as stable and cost-efficient process operation..

Challenges in Treating Flexographic Wastewater

- High dye and pigment content
- Insufficient separation performance
- Overdosing ("more is better" approach)
- Varying wastewater compositions
- High chemical consumption
- Residual turbidity in the clarified water
- Poor sludge filterability
- Process instability and increased monitoring effort

A key challenge in flexographic printing is the constantly changing color palette. For wastewater treatment, this means fluctuating process parameters such as COD, pH value, and dye concentration. Standard solutions often reach their limits under these conditions.

F&S Solution Approach

With the ZetaPol 1175 product range, Färber & Schmid has developed a series of reaction separating agents specifically designed for the treatment of dye-containing wastewater, particularly from flexographic printing processes.

Advantages Compared to Standard Treatment Chemicals

- Reduced dosage requirements
- Improved clarified water quality
- Enhanced sludge filterability
- More stable process conditions
- Reduced monitoring effort



Practical Application Example

A comparative test was conducted using flexographic wastewater, evaluating a standard treatment solution against our ZetaPol 1175-FD.

Untreated wastewater	Standard treatment	ZetaPol 1175-FD
		
<ul style="list-style-type: none"> ❖ High dye concentration ❖ No phase separation 	<ul style="list-style-type: none"> ❖ Poor clarified phase ❖ Slow sedimentation ❖ Poor filterability ❖ High consumption 	<ul style="list-style-type: none"> ❖ Excellent clarified water quality ❖ Fast sedimentation ❖ Good filterability ❖ Up to 40% lower consumption

Interested?

See the results for yourself in your own application. We are happy to conduct on-site comparative trials to determine the optimal solution for your process.

Contact us – we will be glad to advise you.



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