

## Piling

### Description

Piling in SFO printing is a problem associated with coated paper grades. Piling occurs when fine particles are released from the coating layer and accumulate on the rubber blanket. Under the influence of the nip pressure, the particles wander to the trailing edges of print areas. When particles accumulate, this is observed as a lower density on the trailing edge of print areas. The particles causing piling typically consist of hydrophilic material which transfers ink poorly.

Usually piling is a case of back trap piling, which can be observed by the colors printed in the first units (black and cyan) causing piling in the last units (ink setting and back trapping).

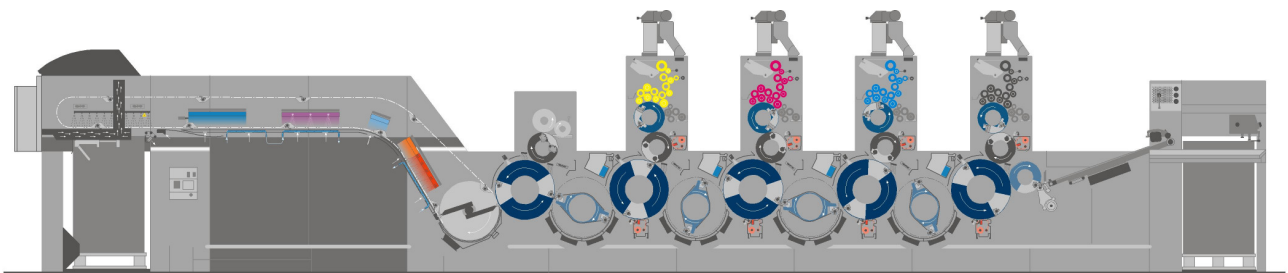
The piling tendency of coated papers can be increased by

- using tacky and fast setting inks

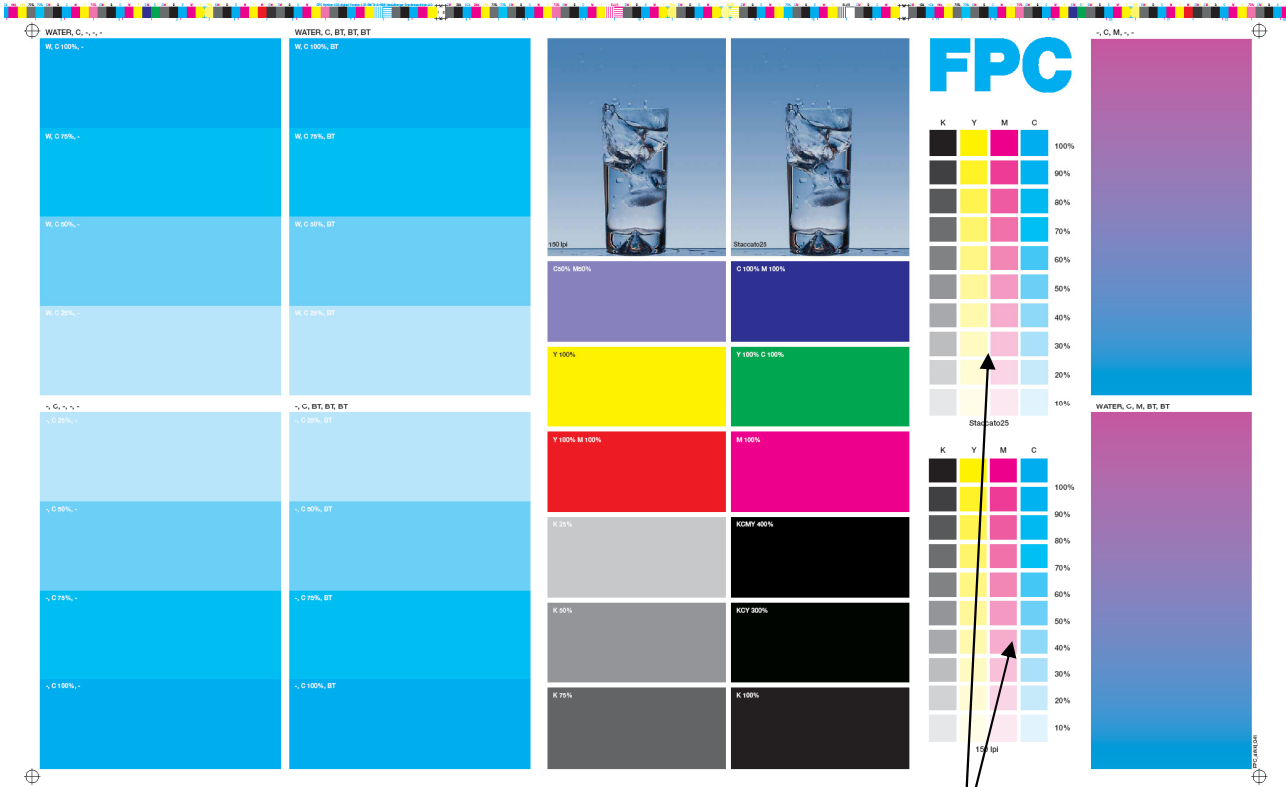
- running the last printing units with low fount feed
- using stochastic screening and / or high line densities
- using alcohol free fountain solution
- increasing the temperature of the fountain solution (usually 10 °C → 17 – 19 °C)
- using the coating/varnishing unit as a fifth back trap nip

Piling printing is usually conducted as a constant print density trial. In order to test the piling tendency, some 3000 sheets per trial point are required.

After running the required amount of copies, pictures are taken from the piling areas in the fourth and the fifth units. Also transparent tapes are drawn from the piling areas for visual evaluation and comparison of the piling.



**Layout**



FPC\_ahk6\_041  
PRIMA\_041meta  
Screen Ruling\_...  
ipi  
Output date:07-01-24  
Calibration Curve\_...

Piling:  
pictures and tapes

**Amount of paper needed:**  
3000 sheets/trial point

**Measurements:**

- transparent piling tapes:
  - visual evaluation
- pictures of the piling areas on the rubber blanket

