



# Ink Performance

Problems occur when an ink's rheological properties are broken down or destroyed.

In the early stages of water absorption, certain inks retain all their favourable printing qualities. Then, as water absorption reaches a certain point, ink breaks down, loses flow and no longer transfers to the plate. Worse, it may transfer to non-image areas, causing tinting and scumming.

Laboratory observations show that during the early stages of water addition, a water-in-ink emulsion is established, However, as the amount of water increases, at some point the ink no longer takes up any more and breaks down, creating an ink-in-water emulsion. Once this situation exists, **ink loses print density (greying out)**, and dampening solution carries ink particles to the plate's non-image area, creating scumming.

*Enter the water pick-up test*