

# ACTEGA Kelstar Technical Bulletin

## Color Shift & Ink Burnout

Color shift and ink burnout are troublesome problems that can occur when printing and over coating with aqueous and UV coatings. There are many variables which can cause ink burnout and color shifting such as paper alkalinity, ink pigment selection, water pick up of ink, fountain solution selection, type of press drying system and coating formulation used.

The National Printing Ink Research Institute has published a list of inks and pigments which are sensitive to UV chemistry. Pigments may be troublesome due to their lack of alkali and solvent resistance. Listed below are a few of the sensitive pigments which should not be used with aqueous or UV curable coatings.

- **Rhodamine Yellow Shade**
- **Rhodamine Red Shade**
- **Rhodamine Blue Shade (PMS purple)**
- **Reflex – Alkali Blue**
- **Methyl Violet**
- **Redlake C (Barium)**
- **Warm Red**

Fluorescent pigments and pastel inks, primarily the pink and blue shades have the tendency to color shift when used with aqueous and UV coatings.

Caution should be used because color shift cannot always be seen immediately off press. In fact, color shift or burn out can occur months later.

Using alkali or fade resistant permanent pigments such as Naphthol and Quinacridones are recommended in particular inks which are formulated with sensitive pigments. Reducing water pick up of inks and using stocks with less holdout will help minimize coating penetration into ink and reduce potential color shifting.

When aqueous and UV coatings are used, it is recommended that they be tested over inks and stocks prior to use. This is to both minimize the possibility of color shift and to visually inspect the final product compared to the uncoated ink standard.

To avoid potential color shift and ink burnout, have your ink manufacturer use alkali or fade resistant pigments and check compatibility use.

For information regarding testing methods, please contact your local ACTEGA Kelstar technical representative.

**Contact ACTEGA Kelstar** at 856 829 6300 or [info.actega.kelstar@altana.com](mailto:info.actega.kelstar@altana.com) for additional information or technical assistance.