

# Fighting the Battles Against Calcium

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The skirmishes are everywhere - roller glazing and stripping, white blankets, pH and conductivity drift, plate blinding and picture framing. Calcium buildup problems are popping up all over the pressroom. Sometimes it is only a little flare up like plate blinding, quickly taken care of by replacing the plate, but other times it is an all out war with build up on rollers and blankets causing poor print quality and lost press time.

Calcium is a formidable opponent. It can attack from different positions, strike when you least expect it and cost a great deal to remedy.

The three main sources of calcium in the pressroom are water, red inks, and alkaline papers and coatings. For today's printers alkaline papers seem to be presenting the greatest frustration. Fighting calcium contamination caused by these papers can be a tough, tedious and ongoing battle.

Why do today's alkaline papers contain so much calcium? It is cheap and it gets the job done. For much less cost than Titanium Dioxide, calcium provides the same benefits - enhances whiteness, opacity, and an alkaline pH that keeps the paper from yellowing. A typical alkaline paper is 15 per cent by weight calcium. According to industry experts, this is going to remain the same or get even higher, so calcium buildup problems are not going to go away.

It is time to prepare your assault! Following are some tips to help you avoid the bloody battles with calcium and keep the presses running, no matter what kind of paper you have to use.

## Daily Maintenance

- Clean blankets regularly with a water miscible press wash.
- Clean rollers with a strong calcium dissolver.
- For color changes, use a deep cleaning, two-step roller wash.
- Use a calcium-fighting additive in the fountain solution.

## Weekly Maintenance

- Thoroughly clean rollers:
  1. Clean with a good quality press wash to remove ink.
  2. Use a premium calcium dissolver to pull calcium from roller.
  3. Rinse thoroughly with press wash to remove contamination.
  4. Clean and flush fountain system.
  5. Deep clean blankets with a conditioner and rubber rejuvenator.

## Other Tips

- Use a fountain concentrate with additives to combat calcium buildup.
- Use calcium free red inks.
- Use treated water to eliminate calcium (i.e. RO water).
- Watch ink rollers for stripping and glazing. Clean immediately.

- Monitor fountain solution for pH and conductivity drift - signs of contamination.

### Combating Calcium

| The Possible Culprit | The Symptom  | The Solution  |
|----------------------|--|---|
| Red Ink              | <ul style="list-style-type: none"> <li>• Calcium buildup in the red ink unit</li> </ul>  | <ul style="list-style-type: none"> <li>• Use a calcium-free red ink</li> <li>• Use a calcium fighting fountain concentrate</li> </ul>   |
| Water                | <ul style="list-style-type: none"> <li>• Calcium buildup in all units</li> <li>• Calcium buildup on outer edge of rollers, outside the sheet or roll width</li> </ul>  | <ul style="list-style-type: none"> <li>• Use treated/RO water</li> <li>• Use calcium fighting fountain concentrate</li> <li>• Use additives to fight calcium</li> </ul>   |
| Alkaline Paper       | <ul style="list-style-type: none"> <li>• Buildup of calcium across whole roller, not only on edge</li> <li>• Roller stripping, plate blinding, fountain solution contamination or pH &amp; conductivity drift, picture framing, blanket contamination</li> </ul> | <ul style="list-style-type: none"> <li>• Use a calcium fighting fountain concentrate</li> <li>• Use additives to fight calcium</li> <li>• Use a strong calcium dissolver to clean rollers regularly</li> <li>• Use a water miscible press wash to remove contaminants</li> <li>• Do preventive maintenance, clean up regularly</li> </ul> |