

Tech Tip 9

Production Control Techniques

Eliminating Scrap

Scrap is expensive. Experienced platemakers know that the way to eliminate scrap, prevent waste plates and control plate quality is to keep adequate production records. Factors such as exposure time, UV light intensity, washout time and washout solution freshness all have a major impact on plate quality and press performance. One key to maintaining quality standards is to keep an accurate daily log of critical production conditions. This Tech Bulletin will help you set up a production log and give you control of plate quality.

Consistency Required

Consistent results over the entire range of print jobs is the first objective. MacDermid photopolymers help you achieve this objective with maximum ease and minimum scrap. MacDermid materials are formulated for wide exposure latitude and excellent sensitometry, reducing the need for trial exposures or plate masking. MacDermid sheets are manufactured to precision tolerances with dimensionally stable polyester or metal backing.

Control Factors

Even with consistent photopolymers, you must control plate exposure, plate washout and plate finishing. These steps will be affected by such things as UV lamp intensity and washout solution freshness. Lamp intensity will drop off gradually over time and result in poor plate structure or loss of fine detail if not replaced in a timely manner. Finishing bulbs must also be replaced regularly to maintain tack-free plates. A spent washout bath will cause poor depth in reverses and tacky plates.

MacDermid Production Logs

We have developed Production Logs to help you record critical data and keep track of control factors. You can duplicate these forms ([MacDermid form](#)) on your office copier. They are designed so that completed sheets can be compiled in a 3-ring binder. These sheets are the logical place to record material lot numbers, washout solution changes and the results of routine QC checks.

Keeping these data will also improve production efficiency since the results of previous jobs



are available to guide new work. The data will highlight changes that can affect quality. For example, a gradual increase in plate tack may indicate that finishing bulbs need to be replaced or that the washout bath needs replenishment. Finally, it will be a valuable tool when troubleshooting is required.

PRIZM

Record for each plate

1. Date
2. Job number
3. Job description
4. Exposure times (back & face)
5. Vacuum (bottom & top)
6. Dispense temperatures
7. Washout time
8. Bottom glass position
9. Post exposure time
10. Finishing time
11. Final plate gauge (total & floor)

Check daily and record

1. Vacuum gauge reading
2. Aqueous processor bath temperature
3. Oven temperature

Check weekly and record

1. Exposure light intensity

Note changes when made

1. Photopolymer lot number
2. Washout bath
3. UV Lamps (record hours of use)

MacDermid PRODUCTION LOG

Record for each plate

1. Date
2. Job number
3. Job description
4. Exposure times (back and face)
5. Washout time
6. Drying time
7. Post exposure time
8. Finishing time
9. Final plate gauge (total & floor)

Check daily and record

1. Oven temperature



Check weekly and record

1. Exposure light intensity
2. Processor washing rate

