



LAMITECH, INC.

Serving the Paperboard Industry Since 1943

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Thru White Printing and Converting Recommendations

This information is not all inclusive and does not represent any guarantee. At your request, Lamitech will provide samples for testing.

Printing Recommendations

- Dot gain correction curves will be similar to SBS; however, an allowance may be required for dot gain due to higher impression.
- 15% on a 50% screen. This allowance is in addition to the press' normal fingerprint.
- Allow material to acclimate for at least forty eight hours before printing.
- Adjustment of the Head Guide (MD registration) to its highest position may be required. However, care should be taken to keep the Head Guide as low as possible to reduce sheet drag.
- Use of textured Side Guide Bar (CD registration) will assist in achieving repeatable sheet position in the press cross direction.
- If necessary, textured grippers may help with consistent sheet transfer between print stations.
- Conventional, UV and Hybrid inks have been used successfully in printing on Thru White.
- Ink tack should range between 8 and 14 (800 rpm) whenever possible (provides best ink flow to cover peaks and valleys of the surface). In general, ink tack levels on the press should descend from highest to lowest value as you move through the color stations. Slightly higher ink tack levels have been used with success to control dot gain. Need to use caution to avoid sheet delamination.
- Recommend using lighter coverage levels on the early press stations. Use of heavier inks on subsequent stations generally enhances folding carton printability.
- Consider running print decks close together. This will allow less "open time" between stations, resulting in lower release levels and lower stress on paper
- Solid ink coverage will cause Z-direction stress on the paper. This stress can be reduced by applying the following techniques: a) Apply the solid coverage in two steps: First print a screen of 50% followed by solid coverage. b) If CMY screen is used to as an overprint to enhance density of black solids, consider applying CMY first.
- Heavyweight folding carton materials will generally require more impression pressure than standard folding carton grades due to the compressibility of the folding carton stock. While it is usually possible to increase impression to 0.009" or higher, too much impression will increase the chance of delamination. Use the least amount of impression required to achieve quality print results.
- The use of an easy release blanket may be helpful processing when printing Thru White to reduce Z-direction stress on sheet.
- It may be necessary to run a modest amount of sheets at the beginning of a run to reduce ink tack to "press run" conditions. This activity has been shown to benefit the press run by allowing the ink to be conditioned by roller train friction and heat to become less tacky. During this time the dampening system is also helping to emulsify the ink to create the appropriate run-condition tack/release levels.
- Care should be taken to keep the edges of the sheeted board clean. Wiping down edges of sheeted board with fountain solution may help reduce hickies.
- The use of screen prints instead of solid colors may reduce hickies, i.e. process black may provide better results than using solid black print. It is well known that when printing boards of all types (SBS, CCNB, CCKB, etc) that delamination of the board can occur under certain print conditions. Delamination is almost always the result of excessive Z-direction force on the paper, caused by high ink tack or other conditions. These noted suggestions are provided to specifically address the issue of delamination, wherein the paper is separating internally. This is not to be confused with other failure conditions such as coating release (coating not anchored properly to sheet) or blistering (Often caused by excessive heating during a drying process).

Die Cutting and Scoring

- The use of 0.070" nicks is a good starting point. The frequency and spacing of the nicks will be die cutter and blank design specific.
- Hardened, sharp, 2pt. Cutting rules should be used. The cutting rules should be center beveled and of a height typical for cutting packaging material (ex. 0.937)
- Scoring/Creasing should be performed with new rules that have sharp corners.
- A standard, to slightly narrower, channel matrix should be used. The rule height should be configured for a 0.034" caliper board (ex. 0.903). 4 pt. rules are generally recommended. 6 pt rule may be helpful for 180 degree bends. Recommended counter thickness is 0.032". Recommended channel widths are 0.080" (cross grain direction) and 0.076" (parallel grain direction).
- Lack of humidity and paper moisture can cause unusual cracking on scores. Keep heat to a minimum during print processing. In excessively dry conditions you may want to consider humidifying work area or wrapping product between stages to minimize moisture loss.
- Standard, to slightly higher, impression pressure may be required for adequate scoring of the base sheet. This is critical to insuring better score cracking resistance during folding.
- Teflon based sprays can be used on the die rules to extend life and reduce dusting.

Folding and Gluing

- The use of standard, packaging grade, cold set, PVA adhesive is recommended.
- The adhesive can be applied via glue gun or applicator wheel.
- The adhesive should be applied to the coated side first.
- Pre-break stations may be especially useful on cartons with large panels to be folded, especially in the sheet's machine direction.