Laser Product Guidelines

for Fasson® pressure-sensitive laser products

The following guidelines outline the key factors critical to the successful converting and processing of Fasson laser printable products.

- Non-topcoated film materials require the use of a press-applied direct flexographic topcoat for proper ink and toner adhesion. Perform extensive tests for compatibility with the ink manufacturer of solvent- or water-based formulations.
- Use low-wax or wax-free topcoats. Limit the use of surfactants.
- Avoid flood-coating the sheet as it could result in uncontrollable curl and poor toner anchorage. Consider using a screen to give the appearance of a solid.
- Avoid over-drying the web to dry the ink. Excess heat can result in uncontrollable curl.
- To aid consistent feeding, label removal from liner, and to prevent adhesion ooze, die-cut and strip at least 1/8 inch matrix from the leading edge or (preferably) around the entire sheet.
- For applications where matrix removal is not possible, make sure that the die cuts do not run off of the edge of the sheets. Die cuts running off the sheet encourage adhesive flow and increase the probability of adhesive build-up in the printer. Additionally, care should be taken to select a product designed by the supplier to be used in non-matrix-stripped laser applications.
- Many laser printer OEMs recommend label formats to optimize the performance of various media (including labels) in their equipment. Always inquire which make and model printers your customer is using to determine if your form design meets the manufacturer's recommendations.

Laser Product Converting Tips

Comprehensive guidelines for Fasson® laser products

The following guidelines will help you maximize on-press efficiencies when converting Fasson laser products.

PRE-PRESS

- Acclimate the rolls to the pressroom environment prior to die cutting and sheeting to ensure product performance. Depending on the amount of material involved this could take anywhere from eight hours to two days. Ideal conditions are 60-80° F and 45-55% Relative Humidity (RH).
- Keep unconverted stock wrapped and conditioned.
- Keep rolls up off of concrete floors to prevent the paper from absorbing moisture.
- Practice first-in-first-out inventory control. Avoid excessive storage time to provide optimum performance. Generally, use of the materials at the end-user within six months after converting will ensure optimum performance.

TOP-COATING (Film Products)

- Non-topcoated film materials require the use of a press-applied direct flexographic topcoat for proper ink and toner adhesion. Perform extensive tests for compatibility with the ink manufacturer of solvent- or water-based formulations.
- Prior to flexo printing, apply topcoat for best results. A second pass after flexoprinting will ensure toner adhesion.
- Use low-wax or wax-free topcoats. Limit the use of surfactants.
- Keep viscosity at recommended levels and pH within a 4.5 to 5.5 range for good drying characteristics. Use of ink pumps and re-circulation systems can prevent pre-drying problems and poor topcoat distribution.
- Uneven distribution and/or inadequate curing/drying of the topcoat can lead to laser printer feed or contamination issues.

PRINTING (General)

- All Fasson toner products are printable with both water- and solvent-based inks. Coldset and conductive inks should be avoided.
- Avoid flexo-printing areas that will be laser printed unless compatibility testing with the toner has been fully tested.
- Avoid flood-coating the sheet as it could result in uncontrollable curl and poor toner anchorage. Consider using a screen to give the appearance of a solid.
- Avoid over-drying the web to dry the ink. Excess heat can result in uncontrollable curl.
- Avoid spraying powders on the printed sheets as residual powder will result in possible damage to the printer and unwanted toner spots/streaks on the laser-printed sheets.

LABEL FORMAT

- For film products, material should be run with Grain Direction *(machine direction)* perpendicular to the Feed Direction of laser printing. Most paper products can be used without concern for the orientation of the material.
- A 1/2-inch Non-Image Buffer around the sheets is recommended to insure proper barcode and text resolution/toner fusion, especially with desktop laser printers.
- To avoid frequent processing jams, perforations applied through the construction should incorporate uncut ties .020 inch thick alternating with .375 inch cuts.
- To aid consistent feeding, label removal from liner, and to prevent adhesion ooze, die-cut and strip at least 1/8 inch matrix from the leading edge or *(preferably)* around the entire sheet.
- To prevent printer jams and delamination of the label, avoid liner and face slit cuts.
- 1/8-inch matrix removal around the entire sheet is recommended for material feeding through high-speed sheet fed printers. 1/16-inch matrix removal around the entire sheet is recommended for material feeding through low-speed desktop printers *(paper products)*.
- Matrix removal offers the following advantages:
  - Prevents adhesive contamination of the photoreceptor and feeding devices in the printer.
  - Aids in label removal from the liner.
  - Aids in re-folding of continuous web material.
- For applications where matrix removal is not possible, make sure that the die cuts do not run off of the edge of the sheets. Die cuts running off the sheet encourage adhesive flow and increase the probability of adhesive build-up in the printer. Additionally, care should be taken to select a product designed by the supplier to be used in non-matrix-stripped laser .

DIE-CUTTING

- Match tooling to the facestock and liner type used. **NOTE:** Steel-to-steel dies are recommended for optimum performance.
- Maintain clean, sharp knives/blades for cutting/sheeting.
- Foam-packed dies help minimize on-press label pre-dispensing, as does stripping the matrix directly off the die with film products.
- Use static eliminators on press if possible. This is especially important with film products.

SHEETING

- Clean sharp knives are a must to prevent rough edges and excessive adhesive ooze. Dull knives can cause paper dust and adhesive contamination in the printer.
- Grain direction must be considered to ensure proper feeding through high and low speed laser printers

PACKAGING AND HANDLING

- Special care should be taken to neatly jog the sheets to prevent damaging the edges.
- Support stacks with rigid board or boxes prior to packaging to prevent damage to sheet edges.
- It is recommended to keep 200-300 sheets per stack for easy handling with film products and 200-500 sheets with paper products.
- Converted sheets should be protected from both moisture and physical damage.
- Poly-wrap or bag stacks as soon as possible *(e.g. off-press)*.
- Materials should be packaged in quantities consistent with the usage at the end-user. Place 200-300 sheets between two heavy chipboard or corrugated sheets for high volume applications and 100 sheets per package for low volume applications.
- Place individual packs *(no more than 1000 sheets)* in corrugated boxes.
- Do not stock cartons more than four-high to avoid excess pressure, which might induce adhesive flow.
- Avoid stacking skids on boxes.
- As with all pressure-sensitive products, it is recommended that materials be stored at 70° F and 50% RH in protective wrappings.
- Do not store cartons directly on concrete.

LASER PRINTING

- Open sheet packs only as needed for job and time allotted. Crack/fan packs prior to feeding. Allow at least 24 hours after conversion, prior to testing materials for stackability and feedability.
- Acclimate material for 24 hours at printer's environment prior to processing.
- Do not allow stacking of more than 200 sheets at output/delivery tray.
- Rewrap with cardboard and store unused sheets on flat surface.
- Keep laser printing equipment well maintained as indicated by the manufacturer *(e.g. change cleaning pads, replace fuser units, remove used toner, worn belts and rollers)*. The use of appropriate film label accessories is particularly important.
- Every 4000 processed pressure-sensitive sheets, clean all paper paths, feed transport rollers and guide ribs within laser printer using film remover and run 25-50 plain paper sheets; adhesive, topcoat, and/or toner residue can inhibit proper processing.
- Maintain actual fuser temperature at the minimum setting that allows proper toner fusion and adhesion. The printer thermister should be inspected periodically and replaced when visibly contaminated.
- The laser printer should be located in an environment of 70° F (+/-) 10 degrees ambient temperature and 50% RH (+/-) 10 percent. Area should be well ventilated.
- Keep all of the printer's ventilation openings free of obstacles to prevent excessive heat build-up within the unit.
- Keep a 14-inch clear working area around laser printer and same distance from any walls or other printing units.