

Tips for converting LASER and INK JET products

Labelstock selection

When selecting a labelstock for a laser printer, it is important to consider the total construction caliper, stiffness, and the coefficient of friction of both the facestock and the liner.

The actual maximum allowable caliper varies by printer. Some of the smaller desk top printers allow only 7 mils total caliper and require the labels to only be fed through the manual feed tray.

While the stiffness of the sheet is important to prevent jamming in the printer, we have yet to find an actual recommended stiffness target for any printer. Most printer manufacturers suggest that the Sheffield Smoothness should be above 100 SU to make sure the coefficient of friction is suitable for feeding and tracking in the printer, but below 300 SU to keep the roughness of the sheet from effecting the print quality.

High speed, stand alone printers are typically equipped with more capable feed mechanisms (including air assisted), as well as higher fuser roll temperature capabilities that allow it to handle heavier weight, thicker caliper constructions than the typical desk top laser printer.

Ink jet printers have many of the same feed mechanisms as laser printers, but they do not have the same temperature considerations presented by the fuser roll in a laser printer.

The key characteristics of an ink jet sheet are fast drying time, minimal dot gain, density of printed black without mottle, bright white finish, water resistance, and wet rub resistance. For gloss sheets it is important that the gloss is retained in the imaged area.

Pre-press

When storing, keep the products wrapped and protected.

Avoid concrete floors and walls because they give off moisture to the paper. Ideally, the press room environment would meet TAPPI standard conditions of 72°F and 50% RH (relative humidity).

Our curl specifications are built around TAPPI standard conditions (72°F and 50% RH). From a more practical standpoint, laser and ink jet products should still be functional at 60° to 80°F and 40 to 60% RH. The longer a product is held in a roll format, the more roll set curl it is likely to have, so it is important to exercise good first in, first out, inventory practices.

Laser and ink jet products will perform best on press when allowed to acclimate, unwrapped, to the press room environment.

Printing, Converting, and Packaging

Flood coating the sheet can result in curl (typically cross direction to the facestock) issues. When the appearance of full coverage is required, we recommend using a screen to achieve that look.

If the end user is going to laser print over an inked area they will need to test whether the toner is compatible with that ink system. Avoid conductive inks because they can effect laser print quality.

Avoid inks that will be adversely effected by exposure to 401°F (205°C) for 0.2 seconds under 15 PSI.

Avoid over-drying the laminate when curing the ink as this will lead to excessive curl.

It is advisable to die cut and strip **at least 1/16"** matrix around the edge of the sheet to minimize adhesive contamination of the laser printer. Contact Technical Consulting when matrix removal is not possible (877-210-5104).

If the product is to have internal die cuts, it is preferable to remove the matrix between the labels. Removal of the matrix minimizes adhesive contamination that may occur if the adhesive is pulled out by the die. Removal of the matrix also assists in the removal of the label by the end user.

Keep the dies well maintained and sharp. When slitting an edge where you could not remove the matrix or sheeting, make sure the knives are kept very sharp to prevent the build up of adhesive ooze or dust that can subsequently contaminate the printer.

Take every effort to minimize static on press as it can cause jams in printers and effect print quality (toner scatter).

Special consideration should be taken when packaging laser and ink jet products. The products should be packaged immediately after printing and converting to prevent moisture and physical damage.

There are several methods for accomplishing this, including bagging the product and putting them into corrugated boxes of the correct size; this is ideal for low volume.

The product can be sandwiched between two sturdy pieces of cardboard or paperboard of slightly larger dimension and shrunk wrapped for high volume.

Do not over stack sheets or cartons; the weight of the stack may induce adhesive ooze.

Converted products should be stored at 70°F, but realistically, expect it to be stored from 60° to 80°F. General purpose permanent adhesives are more forgiving than all temperature or removable adhesives. Do not store directly on concrete.

Laser Printing

Laser printing should be done in a room that is maintained at 60° to 80°F, and 40 to 60% RH.

Open the packaging and allow the product to acclimate to the printing room environment prior to printing. Just prior to placing the product in the feed tray, fan the material to improve the feed, but take care not to damage the edges. Only use the feed tray that the manufacturer of the printer has designated for labels.

When running large volume label jobs through the printer, running a few standard bond sheets through every few thousand sheets can help keep the printer clean of adhesive. Some printer manufacturers require the purchase of a film cleaning attachment to run labels.

If your printer has a temperature setting for labels, it should be used. If it does not have a specific setting for labels, the fuser roll should be set to the lowest temperature that still allows for good toner anchorage.

Each OEM has their recommendations for form design, including how close to the edge and how close to a die cut the print can be and still scan.

Under no circumstances should a sheet of labels be run through a laser printer more than once.

Follow all recommended maintenance as described by the printer manufacturer.