

Foil Fuser Q&A

What is foil fusing?

Foil fusing is a process where foil is bonded to a toner image area that was created using either a laser printer or a copy machine.

What types of foils are available for foil fusing?

Gold, silver, metallic colors, flat and gloss pigment colors, and a wide selection of special application foils like rainbow, oil slick, pearls, glitters, and holographic patterns.

Is a die required to produce foil fusing?

No. Foil fusing does not require any type of die. Laser printer and/or copy machine toner is used to bond the foil to the paper.

Is all laser printer and copy machine toner compatible for foil fusing?

No. Certain laser printer and copy machine manufacturers are using additives to make the toner image area have a higher gloss. This type of toner does not foil fuse well. If you have any questions about the suitability of your toner, we will be happy to run compatibility tests on your samples.

Does fusing foil only stick to black toner?

No. Foil will fuse to all toner image areas regardless of color.

Are any special skills required to produce high quality foil fusing?

No. There is no "makeready" or other special skills required to produce foil fusing. Operators are only required to set the appropriate speed and temperature for the type of foil and paper being run.

Do I need a foil cutter?

Yes and no. Customers can purchase foil pre-cut to specific widths but this is often inconvenient and wasteful if you wind up being forced to run a job with a roll that is wider than necessary. Purchasing foil in 24"-25" wide rolls, then cutting the specific width required for each job will minimize foil waste and cost.

Do you have to run a foil width that matches the paper width?

No. Foil fusing only requires that the foil width be slightly wider than the toner image area to be foil fused. Using foil cut slightly wider than the image area, plus the ability to run sheets portrait or landscape helps to minimize foil waste and expense.

What is the maximum paper thickness that can be foil fused?

The limiting factor in maximum paper thickness while foil fusing is based on the maximum sheet thickness you can run on your laser printer/copy machine.

Can the foil draw be controlled to match the length of the image area to minimize foil waste?

No. There is no foil draw control on a foil fuser. When paper is being fed through the machine and the impression is engaged, foil is drawn at the linear rate of the paper. Foil waste can be minimized using the proper foil roll width and by how the sheet is run through the fuser.

Can rewound foil be reused?

No. Foil that has been through the fusing mechanism and rewound is waste.

Can I foil fuse on both sides of a sheet in one pass through the Foil-Tech?

Yes. Latest generation friction-feed foil fuser models can apply up to two rolls of foil to the top of the sheet and one color of foil to the bottom of the sheet in one pass. Foil fuser models are sold with a single foil unwind/rewind. Additional unwind/rewind stations are optional.

What happens when toner is applied over offset ink?

The foil will only adhere to the toner image area and will not transfer to the offset ink.

Can I lay down two or more colors of foil within the same image area if the foil areas don't overlap?

Yes. Imprint toner and foil fuse the first color, then apply the second toner image area and foil fuse the second color. All foils have different "laser proof" characteristics, customers need to understand these and their laser printer/copy machine characteristics and how they can affect foil surface finish.

Can I produce tight registration, multicolor foil images by running the sheet through the laser printer/copy machine and fuser multiple times?

No. Laser printers and copy machines can not accurately register multiple images imprinted in multiple passes.

Can I fuse "foil on foil" by running the sheet through the laser printer/copy machine and Foil-Tech twice?

Yes. Foil can be fused on foil. However, the top layer of foil will not bond as aggressively to the bottom layer of foil. As a result, the top layer of foil may be scrapped off the lower layer if it is exposed to rough handling.

Can I foil fuse stocks that are not perfectly smooth, like laid?

Yes. Laid stocks (and other stocks with some texture) can be foil fused. However, foil fusing will not crush the texture flat like traditional foil stamping. The finished effect will show the underlying texture through the fused foil.

Do different papers affect the foil finish when foil fusing?

Yes. Very smooth or coated stocks will provide more of a mirror finish when fusing gold, silver and metallic colors. Other stocks will foil fuse well but with less of a mirror finish. Paper type and finish also affect the finish that can be achieved using traditional foil stamping.

How does paper thickness affect foil fusing?

Foil fusing is a heat process. As a result, thicker papers will require a higher fusing temperature and more dwell (slower output speed) than thinner papers.

How can I maximize foil fusing speed?

Foil fusing productivity is based on a linear fusing rate for a given type and thickness of paper. Running sheets landscape, whenever possible will maximize throughput.

What is the smallest type that can be used with foil fusing?

We recommend 6 pt type as a minimum size that can be foil fused without letter plugging. Results may vary depending on the type of foil and paper used, and the fusing speed and temperature.

Can I combine large solid areas at the same time I am fusing small type?

Yes. One of the interesting characteristics of foil fusing is that you can fuse large solids at the same time you are fusing small, fine line type.

Can sheets be run through an offset press after they have been foil fused?

Yes. Offset printing and/or printing with a digital duplicator will not affect the foil image area.

Can sheets be thermographed after they have been foil fused?

Yes. During all our testing, foil fused sheets can be thermographed without damaging the finish on the fused foil.

Can foil image areas be embossed on a second machine after being foil fused?

No. Laser printers and copy machines do not apply the toner image area accurately enough on the sheet to allow the foil fused image to be accurately embossed.

Can you foil fuse pre-printed greeting cards and other products that have embossed or foil embossed image areas on the sheet?

Pre-converted social stationery and greeting cards that are to be run on a foil fuser must be designed for this process. First, these products must be able to run through a laser printer or copy machine to create the toner image. Embossed areas must not be too deep, too sharp edged or too close to the toner image area. Personalization of pre-converted social stationery and greeting cards has proven to be the largest foil fusing application to date. The fusing mechanism does not seem to flatten or harm the embossed image areas.

Can you run envelopes through the foil fuser?

We have not identified any envelopes that are suitable for foil fusing. Standard envelopes will seal as they pass through the fusing rollers.

Can you run pressure sensitive (crack and peel) stock through the fuser?

Many pressure sensitive paper stocks are suitable for foil fusing. Plastic and synthetic pressure sensitive materials are not suitable.