

# FoilTech System — FAQ's

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## 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 colours, flat and gloss pigment colours, 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.

## Can a foil fuser be used to produce blind or foil embossing, or die cutting?

No. A foil fuser can only apply flat foil and be used to "Therm-O-Fuse" sheets with a toner image area.

## 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.

## Do you recommend a particular printer?

No. There are too many variables for us to recommend one particular printer. Manufacturers frequently change the specification of a machine, sometimes without updating suppliers. We suggest a customer looks for a machine that suits their business, both current and future and what sits within their budget. When a choice or shortlist has been made, we recommend that you send printed samples from each machine to us for proofing.

## Does fusing foil only stick to black toner?

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

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

No. There is no "make-ready" 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 620mm 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 rewound foil or Mylar be reused?

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

## 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.

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

Yes on the larger models but not on the FT-10. Latest generation automatic and manual Foil-Tech models can apply up to two rolls of foil to the top of the sheet and one colour of foil to the bottom of the sheet in one pass. Foil-Tech models are sold with a single foil unwind/rewind. Additional unwind/rewind stations are optional.

## **What is "Therm-O-Fusing"?**

Therm-O-Fusing is a process where a sheet that has been imprinted with toner is run through a foil fuser with a clear Mylar film instead of foil. The toner is aggressively remelted under pressure from the fusing rollers with the smooth Mylar surface in contact with the toner. Therm-O-Fusing enhances the toner image area in three ways. It improves the durability of the image on the sheet. It smoothes out the toner density across the image area and it changes the surface finish of the toner image to a gloss finish.

## **Can I "Therm-O-Fuse" and foil fuse at the same time?**

Yes. Foil fusing is produced with a higher temperature than Therm-O-Fusing. However, by using a Mylar with a release agent coating, foil fusing and Therm-O-Fusing can be run at the same time.

## **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 colours of foil within the same image area if the foil areas don't overlap?**

Yes. Print the toner and foil fuse the first colour, then apply the second toner image area and foil fuse the second colour. 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, multicolour foil images by running the sheet through a laser printer/copy machine and FoilTech a number of times?**

Not accurately. As we are compiling this, Laser printers and copy machines cannot register multiple images printed in multiple passes accurately.

## **Can I fuse "foil on foil" by running the sheet through the laser printer and Foil-Tech twice?**

Yes. Foil can certainly be fused on foil. However, the top layer of foil will not bond as aggressively to the bottom layer of foil. Sometimes the top layer of foil may be scraped off if it is exposed to rough handling.

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

Yes and No. Laid stocks (and other stocks with some texture) can be foil fused but the result may not be perfect. As the toner does not always print in the valleys of the stock it is impossible for the foil to adhere to it. Foil fusing will not crush the texture flat like traditional foil stamping. The finished effect will show the underlying texture through the fused foil or some areas of foil may be missing.

## **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 colours. 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 out put 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 through put.

## **Can sheets be thermographed after they have been foil fused?**

Yes. During all our testing, foil fused sheets were Thermographed without damaging the finish on the fused foil.

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## **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 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. Personalisation 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?**

Standard (lick and stick style) envelopes are usually not "laser printer compatible" and may seal as they pass through the heated fusing rollers. Laser printer compatible (peal and seal style) envelopes foil fused well during our tests.

## **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.

## **Can foil fusing be used for security applications?**

Yes. There are various transparent and silver holographic security foils currently available. These foils have micro text patterns. Some customers also use standard holographic pattern foils as a security enhancement.

## **What are transparent holographic pattern foils and how are they used?**

Transparent holographic pattern foils are used to apply a holographic pattern effect over single, spot or full colour text and graphics. These foils can be used to create a wide range of visual effects.

## **Can I use white fusing foils on dark coloured stocks?**

Yes. White pigment foil can be fused on dark stocks, including black. White is currently a very popular colour.

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## What is "ThermoEmbossing"?

ThermoEmbossing is a process that allows a foil embossed effect to be created while foil fusing. By applying varying amounts of toner within the image area, the image appears embossed after foil fusing. While this effect can be dramatic, it can only be used on certain stocks.

## Can "scratch off" foil products be produced with foil fusing?

Yes. Using the "Freedom Foil" process and special "scratch off" laminating film, scratch off products can be produced with foil fusing.

## Can text and/or graphics be foil fused over complex toner backgrounds?

Yes. Using the "Freedom Foil" process and gloss or matte "PermaFoil" laminating films, foil text and/or graphics can be fused over toner background images. This process is used for book covers, tickets, etc..

## Can foil fusing be applied to any clear plastic materials?

Yes. Clear acetate can be run through many laser printers and then foil fused. Please check to ensure your laser printer is suitable before running plastic materials.