

UV DTF

UV DIRECT TRANSFER FILM
FILM | INK | VARNISH

What is UV DTF?

UV DTF (Ultraviolet Direct-to-Film) printing is an innovative hybrid technology that merges UV printing with traditional Direct-to-Film (DTF) methods. It uses UV-curable inks that are instantly dried by ultraviolet light, eliminating the need for heat.

This process produces vibrant, permanent, and highly durable decals that adhere to a variety of hard, non-porous surfaces such as glass, metal, acrylic, wood, and plastic. Perfect for customising products like bottles, signage, décor, promotional items and more.

HOW IT WORKS ...STEP BY STEP

1. Create your design:

Use graphic design software, such as Adobe Illustrator or Photoshop, to create your digital artwork. Make sure your artwork has a high resolution for crisp, clean results. You'll also need RIP (Raster Image Processor) software to manage the print layers accurately.

2. Print on the A Film:

Load the A-film, which has a printable adhesive surface, into a specialized UV DTF printer. The printer applies the ink in layers, typically in this order:

- **Colour layer:**
The first layer is the CMYK (cyan, magenta, yellow, and black) ink for your design.
- **White ink layer:**
A layer of opaque white ink is printed on top of the colour layer to make the final design stand out on any surface, including dark materials.
- **Varnish/glossy layer (optional):**
Some printers can add a clear varnish layer on top for a glossy finish and added durability.

3. Laminate with the B Film:

Once printing is complete, laminate the A-Film with the B Film which carries a stronger adhesive. The adhesive transfers to the printed design, turning it into a ready-to-use decal.

4. Apply to surface:

Clean the area surface to remove any dust or oils. Peel off the backing sheet and place the transfer on your item. Press firmly to ensure good adhesion, then gently remove the top film to reveal your final design.



-GLM-

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UV DTF Films

The 30cm **A Film + B Film** (Clear) UV DTF Films are a dual-layer transfer film system designed for UV DTF printing. It delivers high-resolution, durable, and glossy prints without the need for heat pressing or weeding.

For UV DTF film, lamination is an essential step to protect the print, improve durability, and ensure a smooth and easy transfer process. For best results, use a laminator with medium pressure and ensure the roller surface is clean before use.

PRODUCT OVERVIEW

- UV DTF Film Set (**A Film + B Film**)
- A Film is a PET-based Clear or Paper backed White film
- B Film is used for lamination
- Designed for use with UV DTF printers and UV-curable inks
- Print Heads Supported: Epson and Ricoh

FEATURES & BENEFITS

- Provides strong, lasting adhesion to a variety of surfaces including glass, plastic, metal, and wood.
- No weeding required which saves time and reduces material waste for faster production.
- Produces vibrant, professional quality prints with a smooth, glossy finish.
- Excellent durability - resistant to scratches, wear, and fading - suitable for both indoor and outdoor applications.
- Compatible with both light and dark substrates, offering wide application possibilities.

APPLICATIONS

Promotional items, product packaging and labels, signage and display boards, event merchandise, custom apparel accessories, POS, bottle labels, branding and more.

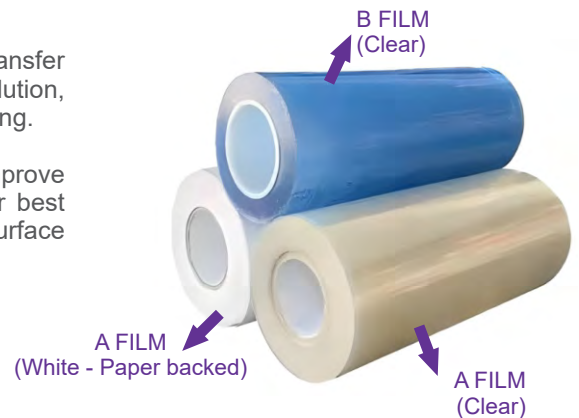
STOCK OFFERING

A Film (Clear or white-paper backing)

- Available in rolls of 300mm x 50m | 300mm x 100m
Sold in full rolls.
- Available in A3 sheets
Colours: Clear, Gold, Silver and Holographic

B Film (Clear)

- Available in rolls of 300mm x 50m | 300mm x 100m
Sold in full rolls.



Key differences between Paper-backed and Clear UV DTF A Films

Adhesion Considerations: Paper vs. Clear Backing

Based on our experience and customer feedback, the adhesive used on paper-backed (white) DTF films tends to be significantly stronger than that of clear-backed films. While this can be beneficial for durability, it may pose challenges on sensitive surfaces, particularly painted items where the adhesive could lift or damage the protective coating during removal.

For high-contact applications such as drinking glasses, keyrings, or frequently handled items, the stronger bond of paper-backed film offers enhanced longevity. However, for delicate or coated surfaces, we recommend testing beforehand or opting for clear-backed film to minimize risk.



UV DTF Inks & Varnish

UV DTF ink stands out for its instant curing, strong adhesion (with or without adhesives), and vibrant, durable prints on nearly any surface. These inks are also flexible enough to perform well on curved or irregular objects.

FEATURES

- Instantly dries when exposed to UV light, eliminating waiting time and enabling faster production.
- Bonds strongly to a wide range of surfaces without the need for heat or additional adhesives.
- Produces rich, vivid colours with excellent opacity and fine detail.
- These inks enable cold transfers using pressure or lamination - no heat press is required.
- Simplifies production by removing the need for powder adhesives commonly used in traditional DTF printing.
- UV DTF inks typically include CMYK + White + Varnish channels. *The varnish layer adds gloss and protection, enhancing both visual appeal and long-term durability.

APPLICATIONS

- UV DTF inks work effectively on glass, metal, wood, acrylic, ceramics, leather, and plastics.
- They are ideal for irregular, curved, or heat-sensitive surfaces where traditional printing methods often fail.

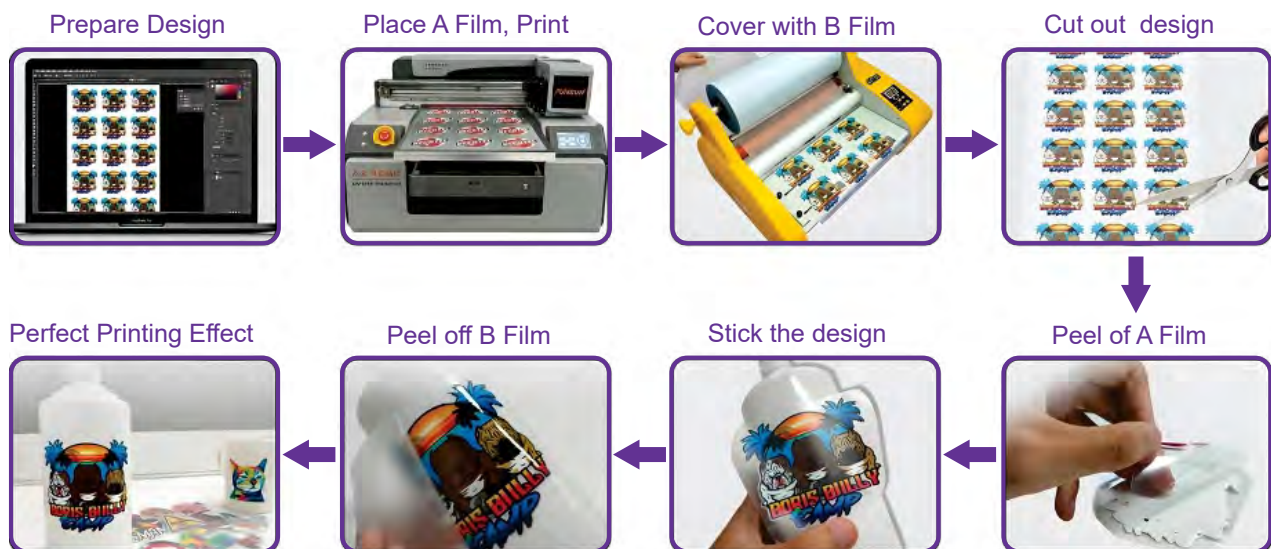
STORAGE CONDITIONS

UV inks should be stored in a cool, dark, and dry environment, ideally between 15 - 25°C with 40 - 60% relative humidity. Proper storage helps prevent premature curing, viscosity changes, and potential print defects.

STOCK OFFERING

Ink Colours: Cyan, Magenta, Yellow, Black and White
Size: 500ml bottle

Varnish:
Size: 500ml bottle



The UV DTF printing process typically encompasses design creation, sticker printing, lamination, cutting, peeling off the cover sheet, and adhering to a hard surface. It is important to note that certain DTF printers, like the GLM Roll to Roll Printer, integrate printing and laminating into a single machine, while other may necessitate a separate laminator.

UV Flush Print Head Cleaner

UV Flush Print Head Cleaner is a specialised cleaning solution used to remove UV ink residue from print heads, nozzles, ink lines, wiper blades and cap stations. It helps prevent clogging, supports consistent print quality and assists in maintaining expensive UV print heads when used correctly.

FEATURES

- Compatible with most UV printheads, including Epson i3200-U1, i3200-HD, XP600, Ricoh G5 & G6 and most hybrid UV-curable ink systems for rigid and flexible substrates.
- Helps clean UV ink residue from printheads, nozzles, ink lines, wiper blades, cap stations and ink pads.
- Assists in reducing blocked nozzles and banding while supporting better ink flow and print quality.
- Suitable for routine maintenance, recovery cleaning, UV ink changeovers and printer preparation before long-term shutdown.

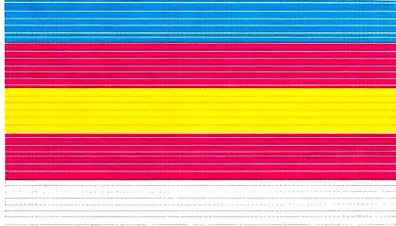


STOCK OFFERING

Size: 500ml bottle

WHEN TO USE UV FLUSH CLEANER?

- Routine Maintenance: Prevents clogging and banding in UV print heads such as Epson i3200 and Xp600.
- Ink Changeover: It is recommended when switching between UV ink brands or formulations.
- Storage Preparation: The cleaner can be used to flush ink lines before a long-term printer shutdown.
- Recovery Cleaning: Assists with severely blocked UV print heads (for example Ricoh G5 and G6 heads).
- Your nozzle test will indicate whether your printhead is in good or poor condition. After cleaning with the UV Flush Print Head Cleaner solution, perform a nozzle test.

POOR NOZZLE TEST	GOOD NOZZLE TEST
 ➤ Clogged nozzles ➤ Banding and gaps ➤ Ink dropouts	 ➤ Full nozzle firing ➤ Even solid lines ➤ No gaps or drops

IMPORTANT

- Do not use solvent cleaners on UV print heads, as they may damage or strip protective coatings.
- Always match the cleaner to the ink type: use UV Flush for UV inks and Solvent Flush for solvent inks.
- Follow the printer manufacturer's guidelines for flushing cycles and recommended volumes.
- Wear gloves and work in a well-ventilated area when handling UV Flush cleaner, as it contains strong solvents.
- Do not use cloth, toilet paper or woven wipes on the printhead. Rough textures can damage the printhead surface, and woven materials may leave fibres behind. Use the supplied cotton swabs for safer cleaning.

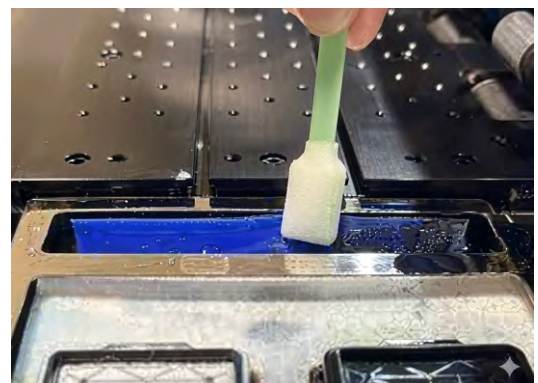
HOW TO USE UV FLUSH CLEANER?

1. Wiper Blade:

After every automatic cleaning cycle performed through the machine software, the printer uses the wiper blade to wipe the printheads and remove ink overspray after jetting. Any ink wiped from the printheads can remain on the wiper blade.

Using UV Flush Cleaner and a cotton swab, clean the wiper blade to remove any hardened ink or residue.

The wiper blade should always be clean and in good condition to help prevent printhead scratches and clogs.



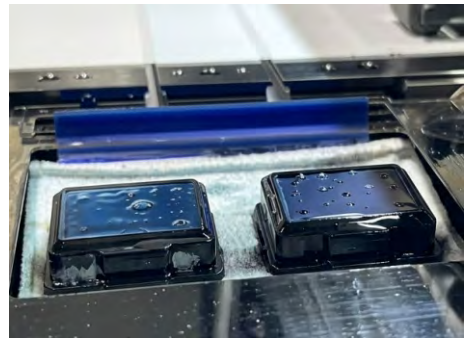
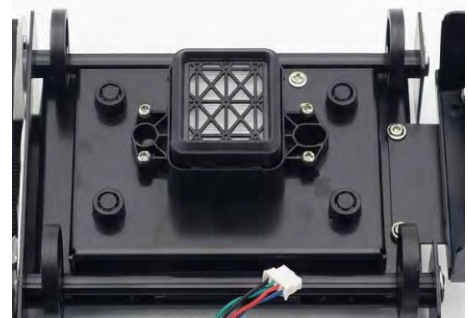
2. Cap Stations/Ink Pads

Cap stations play an important role in the printer's automatic maintenance system. They help draw ink through the print heads during cleaning and protect the print heads from light exposure when the machine is capped.

If the cap stations become clogged or do not create enough suction, the print heads may still clog, even with regular cleaning.

- ▶ Using a syringe, apply a small amount of UV Flush Cleaner onto the ink caps. Do not overfill. Fill only up to the brim of the rubber surrounding the ink pad.
- ▶ Let the printhead return to the cap stations and cap correctly, then turn the machine off.
- ▶ Leave the machine capped for 25 to 30 minutes to help soften clogged nozzles and clean the cap station pads.
- ▶ Turn the machine back on and run a strong cleaning cycle through the printer software. Repeat if needed.

Pro Tip: For badly clogged printheads, leave the machine capped with cleaner overnight or for up to 24 hours. Make sure the machine is turned off and block the waste ink pipes if needed, so the cleaner stays in the cap stations longer.

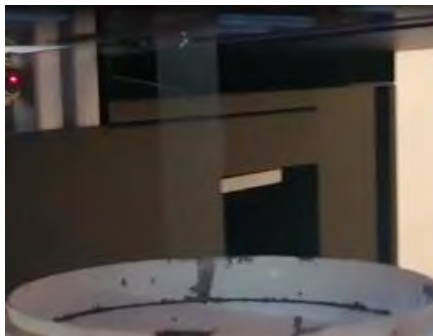


3. Flushing the print head



We recommend that this procedure is done by an experienced technician. If the cleaner enters parts of the printhead, machine cables or connection point, it may damage the printhead or the entire unit.

- ▶ Prepare a syringe, ink tube and UV Flush Printhead Cleaner.
- ▶ Remove the printhead from the unit.
- ▶ Place the ink tube over each damper pin, then gently push the cleaner through each nozzle. Take care that the fluid does not run over the side of the printhead or into the head cable connection pins.



To know if the nozzles are fully open, you should see a curtain-like spray pattern without any gaps in between.

Do not use too much force as this may damage the piezo nozzles of the printhead. Use light to medium pressure and repeat the process if necessary.

UV Printing vs Traditional Printing ... A Quick Breakdown

UV printing stands apart from traditional printing in several key ways. Let's look into the differences so you can see which shines brighter for your needs:

	UV PRINTING	TRADITIONAL PRINTING
Technology & Process - Ink Drying - Materials supported - Print time	▶ Instant curing with UV light. ▶ Almost any surface. ▶ Fast - no drying time needed.	▶ Absorbs into substrate or air-dries. ▶ Typically paper or treated surfaces. ▶ Slower - requires drying/setting time.
Print Quality & Durability	▶ Sharp, vibrant images with excellent color depth. ▶ Smudge-proof, scratch-resistant, and UV-resistant.	▶ Quality varies by method (offset, flexo, screen). ▶ May require coatings to protect against wear and fading.
Environmental Impact	▶ No solvents or excess water. ▶ Lower emissions with instant curing.	▶ Often uses more chemicals and water. ▶ Some processes generate more waste.
Cost & Scalability	▶ Ideal for small runs, prototyping, and customization ▶ Higher per-piece cost for bulk jobs	▶ More economical for large-volume runs. ▶ Higher setup costs (e.g., plates or screens).

Frequently Asked Questions

Is UV DTF dishwasher safe?

The UV DTF transfer film consists of a PET film with a robust adhesive designed for transferring onto rigid products. Although the UV-curable inks used in UV DTF printing are typically durable and water-resistant, they may not withstand the high heat and harsh detergents commonly found in dishwashers. Consequently, while some suppliers may claim that UV DTF prints are dishwasher safe, it is strongly advised against doing so.

Is UV DTF waterproof?

UV DTF prints typically exhibit resistance to water and moisture to a certain degree. The UV-curable inks used in this process are engineered to offer durability and solid water resistance. Nevertheless, the extent of water resistance can vary depending on factors such as substrate type, ink quality, and curing methods.

How long do UV DTF stickers last in the sun?

UV DTF stickers can last anywhere from 1 to 5 years outdoors, depending on factors such as the quality of the sticker, the amount of direct sunlight, and environmental conditions. With proper application, high-quality stickers may last 3 - 4 years outdoors.

On what substrates can you put UV DTF?

UV DTF transfers and stickers are perfect for customization and decoration of smooth, hard surfaces, and they perform even better than dye-sublimation printing and UV flatbed printing. While dye-sublimation can decorate hard surfaces, it requires specific heat press machines for flat or mug transfers. In contrast, UV DTF transfers easily adhere to curved or uneven surfaces of any shape or design. Although UV flatbed direct printing is also popular for hard surface printing, its working process and space limitations restrict what can be printed with the machine. In this regard, UV DTF printing provides limitless possibilities for business owners and designers.

UV DTF printing is versatile and can be applied to various materials, including metal, leather, wood, paper, plastic, ceramic, and glass. Its versatility also makes UV DTF printing a perfect custom solution for tumblers, equipment branding, posters and signage, glass and plastic covers, post-production labeling, cell phone cases, leather wallets, artistic décor, automotive customization, awards and trophies, glass and ceramic ornaments, drinkware, kitchenware, window decals, wholesale transfers, backlit film and special-effect stickers.

In summary, UV DTF printing revolutionizes the way we decorate and customize surfaces, providing a versatile and long-lasting solution for a wide range of applications. Understanding the answers to these questions allows users to explore the world of UV DTF printing and unlock a treasure trove of creative possibilities.

With each query addressed, it's time to dive into this exciting printing technique and unleash your creativity!