

DTG TEX DP

PRE-TREATMENT

DTG is committed to providing our customers with high quality textile printing products. In order to achieve consistent and even white prints on dark or light coloured cotton rich fabrics (55% +) proper application of pre-treatment must be practiced. This is key to obtaining white opacity and ink adhesion to the fabric.

Safety

- Please refer to the supplied MSDS sheet prior to use of this product.
- This product can be used safely when used as directed and when applicable safety precautions are followed.

Equipment needed for proper pre-treatment solution application:

- N95 Approved Respirator (3M™ Model # 8210 or similar)
- Foam Roller (the type used for painting)
- Liquid Mistifier (airbrush, air pump sprayer, fine mist power sprayer, such as Wagner® Power Sprayer Model HVLP)
- T-shirt Press
- Non-Silicone Parchment Paper (also named Quillon paper)

Recommended procedure:

The following procedure will help to ensure consistent quality and performance of the DTGTEX™ White ink:

- 1.** Agitate or shake the pre-treatment solution prior to filling your sprayer. Locate the sprayer area in a different room than your printer(s). Overspray can find its way into the printer and potentially damage the device. We recommend at least 5 metres (16 feet) distance from the printer.
- 2.** Locate the sprayer area in a well-ventilated area. Set the heat press for 170°C (~340°F)
- 3.** In humid environments, it is often beneficial to pre-press the shirt (using the parchment paper as a barrier from the press) for 5 to 15 seconds prior to applying the pre-treatment. This removes some of the water naturally trapped in the fibers and flattens fabrics.
- 4.** Using the spraying system, spray the pre-treatment solution evenly on the area that is to be printed. The recommended coverage is about 20g to 25g (0.7 oz to 0.9 oz) for a 14" x 17" printing area.

For example :

- Set your sprayer for medium coverage. This is normally the setting between no liquid being sprayed and the maximum available.
- Prime the sprayer for a few seconds by spraying into a large cup but not on to the shirt area. This helps prevent larger drops that occur when the sprayer is starting up.
- Keep the sprayer about 12 inches (30cm) from the shirt and begin spraying from the top to the bottom in a left to right (and then reverse, right to left) motion without ever turning off the sprayer
- It is good practice to allow the sprayer to go beyond the edges of the shirt before beginning or reversing direction. This prevents more pre-treatment from being deposited on the shirt during the direction change.
- If all settings are correct, the proper amount of PT solution is sprayed in about 8 - 12 seconds.

HOW TO 'STEP BY STEP' GUIDE



5. Following the application of the pre-treatment solution and prior to heat pressing a close examination of the garment's surface should show the appearance of fine droplets not unlike dew on grass.

A representation is shown on the right:

6. After spraying the garment wipe with the foam roller uniformly and in one direction to get even coverage.

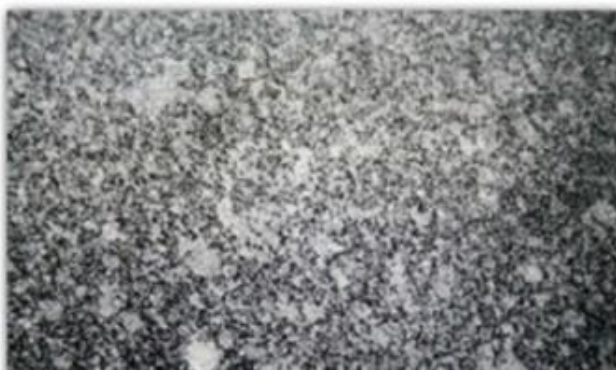
7. For best image quality drying the pre-treated garment in a heat press (using the parchment paper as a barrier from the press) is preferred. Press for a minimum of 20 seconds up to a maximum of 60 seconds at the 170°C (~340°F) setting. Depending on the fabric 20 – 30 seconds is usually enough.



Examples:

1) Correct re-treatment: The image (on right) represents a shirt that has been properly pre-treated, printed, heat-pressed and subsequently washed through three (3) industrial washes.

Note the white underbase and colour retention. This is a properly treated, printed and post-treated shirt.



2) Insufficient Pretreatment: If too little pre-treatment solution is applied the white ink will have a mottled appearance after printing(left). This is due to an insufficient amount of pre-treat required to keep the white ink layer on the surface (the ink soaks into the fibers of the shirt).

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3) Excessive Pre-treatment:

Applying too much pre-treat solution will provide you with a very good looking print prior to washing.

Excessive application of pretreat will cause poor wash fastness and durability.

The white layer becomes much more susceptible to flaking off of the shirt in a wash if too much pretreat is applied. The shirt with an excessive amount of pretreat looks very good after printing and pressing.



The same shirt with excessive pretreat solution applied after washing. This shirt exhibits the cracking and loss of colour associated with too much pretreat being applied.



Conclusion

Hand spraying can be tricky at first, however with practice it is easy enough to master.

With the requirements of health and safety (see Spray gun- pre-treatment guide PDF) it isn't always possible to hand spray and your thoughts must be on using a pretreat machine instead.

Not all pretreat machines are the same however and consistency of coverage may vary as they may have 1, 2 or 4 nozzles for spraying.

Whether hand spraying or using a machine ... consistency of coverage is the key factor.