

# Image Armor

## FREQUENTLY ASKED QUESTIONS

### **What is Image Armor?**

Image Armor Pretreatment is a line of aqueous solutions used by direct-to-garment printers during the DTG printing process to help improve ink adhesion, optical brightness, and wash-ability.

### **Pretreatment? What's That?**

Pretreatment is both a process and a liquid solution used by DTG printers. The process is anytime white ink is to be printed on a fabric, pretreatment is applied in liquid form and then heat set using, most commonly, a heat transfer press. This dried solution then acts like a primer for the white ink to be printed upon, at which time the ink “flashes” when it comes into contact with the primer (pretreatment). Then, a CMYK color print can be printed on the “flashed” white ink, creating a full color image on a colored T-shirt. You can think of the pretreatment as like when you paint primer on drywall to allow the final coat of paint to stay on top – in this case the ink stays on top of the garment instead of soaking into the garment.

### **Do I Have To Pretreat My Garments?**

No. However, if you want to print white ink and have it look good on the shirt, then the answer is YES.

### **Do I have to shake pretreatment prior to using it?**

Yes. It is advisable to shake the pretreatment in the container it came in prior to using it. Pretreatment can settle, or precipitate out of solution, and settle on the bottom of the container. Always shake it up to ensure it is mixed completely before use. Otherwise you will have issues with application, wash-ability, etc.

### **How do I apply Image Armor Pretreatment to a shirt?**

There are two ways. Manually using a Wagner power sprayer is one way. The other is via an automatic pretreatment machine that applies the solution more consistently, evenly and repeatably (this is the most preferred method).

### **How much pretreatment do I apply to a shirt?**

Good question. This varies. It will depend on the weight of the shirt (heavier requires more). The color of the shirt will affect how much too (darker shirts generally require more pretreatment). The construction of the shirt and weave will also affect how much is needed (tighter weave, finer threads) can reduce the amount of pretreatment needed on the shirt. General rule of thumb is as follows. Dark shirts apply more, lighter colored shirts apply less. Heavier shirts require more, lighter weight shirts require less. Image Armor suggests starting by applying 18-22 grams on a standard weight shirt and do your own testing with higher and lower to find the best results for your inkset and printer.

### **What is the correct amount of Image Armor to apply?**

You will have to do some test printing. Most people are finding 18-22 grams for a 14"x14" square area is a good starting point. Your shirt and inkset might allow you to use less or require more.

### **After application what do I have to do?**

After you have applied the correct amount of pretreatment, it must be heat set using a heat transfer press. Image Armor is "fixed" by hitting the shirt with 330F for 30 seconds. If after the heat press releases and there's still moisture present, re-press the shirt for 10 second intervals until no moisture remains. Moisture is the enemy of ink being printed on a non-fixed pretreatment.

### **Do I have to use a lot of pressure when setting the pretreatment?**

Not necessarily. Some people find that using a lot of pressure will help press and hold down the shirt fibers – as the pretreatment is fixed (cured) the pressure helps trap the fibers flat against the shirt making a smoother printing surface. However, high pressure is not always necessary. If you are using a tight weave, good, low fiber, ring-spun 100% cotton shirt you might find lower

pressure will work just as well. In addition, low pressure reduces the “pressed outline” from the heat press.

**Do I have to use the shirt immediately after pretreating?**

No. However to reduce other variables (see below) you should use them as soon as possible after pretreating with as little handling as possible.

**How long can I store pre-pretreated shirts?**

It is not recommended to pre-pretreat shirts anymore than 2 weeks in advance. The best option is to pretreat immediately prior to printing the shirt.

**How should I store pre-pretreated shirts?**

Do not handle more than necessary. Store in a cool, dry place, out of direct sunlight or even fluorescent light sources (the UV exposure is bad for the shirts – try it with a blank white shirt sometime and it will discolor even if you never did anything to the shirt....

**After storing shirts, should I do anything specific before printing?**

Yes. Stored pretreated shirts will want to absorb moisture. Especially if you store the shirts in a box that is sitting on a concrete floor. So make sure to hit the shirt with the heat press at 330F prior to printing to evaporate any moisture in the shirt. Moisture is the enemy to good ink-pretreatment-shirt adhesion.

[We will be continually adding to this FAQ as we get additional requests and questions!](#)