



MACHINES PLUS ACADEMY | PRACTICAL PRINTING GUIDE

DTF Heat Pressing: Time, Temperature & Pressure

A practical guide to the three settings that determine adhesion, finish and wash durability - and why there is no single universal DTF recipe.

FREE TO READ. FREE TO DOWNLOAD. NO PAYWALL.

We share practical knowledge because better information leads to better decisions, better operators and better print businesses.

Prepared by Machines Plus
Australian printing equipment, installation, training and support
machinesplus.com.au/academy
Updated October 2026 | Edition 1 | Guide MPA-DTF-005

The short answer

DTF heat pressing is a system: temperature, time and pressure work together with the film, adhesive powder, ink, garment and press. Changing one part changes the result.

There is no single number that is correct for every DTF transfer. Many conventional systems sit somewhere around 140-160°C and roughly 10-20 seconds, but low-temperature films, different powders and different garments can require very different settings. Use the film/powder supplier instructions as the starting specification.

Machines Plus field note

If a transfer fails, do not immediately add more heat. Too much heat can be just as damaging as too little. Confirm the actual platen temperature, pressure and dwell time before changing the recipe.

What each setting does

Setting	What it controls
Temperature	Activates and melts the adhesive and helps complete the transfer. Too low can cause poor bonding; too high can scorch garments, distort film or overwork the adhesive.
Time	Controls how long the transfer and garment receive heat. Too short can leave adhesive under-activated; too long can flatten texture, mark fabric or overheat the transfer.
Pressure	Pushes the softened adhesive into the garment surface. Too little can cause edge lift; too much can force adhesive/ink excessively into the fabric or leave a heavy press mark.

Before the first press

- Confirm the garment can tolerate the selected heat.
- Pre-press briefly when the garment or room is humid to remove surface moisture and flatten the print area.
- Make sure seams, zips, buttons or collars are not changing pressure across the image area.
- Check that the heat press platen is clean and pressure is even.

Peel timing matters

DTF films are commonly described as hot peel, warm peel or cold peel. Those terms are not interchangeable. Peeling at the wrong stage can lift ink, distort the surface or leave film residue.

Film behaviour	Operator action
Hot peel	Remove the carrier immediately or very soon after pressing, exactly as specified by the film supplier.
Warm peel	Allow the transfer to cool for the specified short period before peeling.
Cold peel	Wait until the film has cooled before removal. Do not rush it because another film brand is hot peel.

What about the second press?

Many DTF workflows use a short finishing press after the carrier is removed. This can improve surface finish and help the transfer settle into the fabric. Use a suitable release sheet or finishing paper and follow the transfer supplier's procedure. A second press is not a substitute for an incorrect first press.

Quick diagnosis

Result	Possible causes
Edges lift immediately	Insufficient pressure, low actual temperature, short dwell, wrong peel timing, under-cured powder.
Looks fine but fails in wash	Adhesive not fully activated, powder/film mismatch, poor powder coverage, incompatible garment finish, insufficient pressing.
Garment scorches or dyes migrate	Temperature too high, dwell too long, sensitive polyester/dye, inappropriate transfer recipe.
Heavy square press mark	Too much pressure, too long/hot, platen larger than needed, sensitive fabric.
Gloss/texture inconsistent	Uneven pressure, uneven heat, inconsistent second press or release material.

A simple test procedure

☐	Start with the transfer supplier's recommended settings.
☐	Verify platen temperature with a suitable heat-press temperature test method if results do not match the display.
☐	Press one test garment and record time, temperature, pressure and peel timing.
☐	Inspect edges, surface, stretch and colour after cooling.
☐	Wash test a sample before approving a new film/powder/garment combination for production.
☐	Change only one variable at a time when troubleshooting.

Do not guess by feel

“Medium pressure” on one press may not equal “medium pressure” on another. If consistency matters, use a repeatable pressure setting and keep the same loading method between operators.

References & further reading

Epson SureColor F1070 User's Guide

<https://files.support.epson.com/docid/cpd6/cpd64429/helpcontents.html>

Roland DG TY-300 / TY-300i Direct-to-Film Printer

<https://www.rolanddg.com.au/products/printers/ty-300>

Epson F1070 User Guide - Required equipment for printing on film

<https://files.support.epson.com/docid/cpd6/cpd64429.pdf>

Important

This guide provides general educational information. Always follow the current instructions supplied by the manufacturer of your printer, ink, film, powder, heat press and substrate. Settings and maintenance requirements vary by product.

Machines Plus Academy

Practical printing knowledge. Free to read. Free to download.

machinesplus.com.au/academy