



Printing Guidelines

Important Printing & Decoration Disclaimer.....	1
Suggested Sublimation Printing Instructions.....	4
Liberty Bags 100% Cotton – Printing & Decoration Guidelines.....	5
75% Recycled Cotton/25% Recycled Polyester Printing Guidelines.....	10
600D Polyester- Suggested Printing & Decoration Guidelines.....	12
210 Denier Nylcon & 70 Denier Nylon – Suggested Printing Guidelines.....	14
Liberty Bags Towels – Printing & Decration Guidelines.....	16
Liberty Bags Alpine Fleece Blankets – Printing & Decoration Guidelines.....	22
Twill Aprons 70% Polyester 30% Cotton.....	29
Chill Cooling Towels Suggested Printing Guidelines.....	31
PVC Plastic/Clear Bags – Suggested Decoration Methods.....	33
Foam Can Holders – Suggested Printing Guidelines.....	35
High-Density Neoprene – Suggested Printing & Decoration Guidelines.....	37
Heavyweight Polypropylene – Suggested Printing Guidelines.....	39
Vinyl and Heat Transfer Guideline.....	41

Important Printing & Decoration Disclaimer

Liberty Bags is a distributor of blank products. The printing and decoration information provided in this guide is intended **for general reference and troubleshooting purposes only** and should not be considered guaranteed production specifications.

Actual temperatures, curing and drying times, pressure settings, inks, adhesives, transfer materials, and other decoration requirements may vary depending on the product, fabric or material construction, printing equipment, production environment, ink or transfer system, and other factors outside of Liberty Bags' control.

Liberty Bags strongly recommends testing all printing and decoration methods on the actual material prior to beginning a full production run. A sample swatch book containing Liberty Bags materials is available upon request to assist decorators with testing and determining the appropriate settings for their equipment and processes.

Liberty Bags assumes no responsibility or liability for printing or decoration results, including but not limited to misprints, improper curing, dye migration, scorching, discoloration, adhesion issues, material distortion, or damage resulting from printing, decorating, packing, or shipping finished products.

Always follow the specifications and recommendations provided by your ink, transfer, adhesive, and equipment manufacturers.

To request a **Swatch Book / Print Sample Test Kit**, please email:
libertybags@gl2p.com

General Printing & Decoration Tips

Product Preparation

- Before decorating, make sure the product is **clean, completely dry, and free of dust, lint, oils, debris, or other contaminants** that could affect ink or transfer adhesion.
- Make sure the printing area is **flat and free of wrinkles, folds, or creases** before positioning the artwork or transfer.
- **Check for moisture before decorating.** Cotton, recycled cotton, polyester, and other materials can retain moisture from storage, humidity, or shipping.

- When appropriate for the material, use a **short pre-press** to help remove excess moisture and wrinkles. If steam or visible moisture is released, allow the product to cool and repeat a short pre-press if necessary.
- Do not begin decorating until the imprint area is **clean, dry, flat, and properly prepared**.

Cooling & Stacking After Decoration

It is equally important to make sure each tote is **completely cool and dry before stacking or packing**. Stacking totes while they are still warm can trap heat and moisture between the bags. This trapped moisture may create condensation and could contribute to spotting, discoloration, ink changes, or other inconsistencies that may not become visible until after the bags have been stacked or shipped.

Allow the totes adequate time and airflow to cool completely after curing. **Do not stack, box, or tightly pack warm totes**. Before packing, confirm that both the fabric and printed area are cool and dry to the touch.

DTF Transfer Preparation

- Before applying a DTF transfer, **inspect the transfer sheet carefully** for spotting, uneven adhesive powder, moisture, damage, contamination, or other visible inconsistencies.
- Make sure the DTF transfer has been **properly and evenly cured before application** according to the transfer manufacturer's specifications.
- The adhesive powder should be **fully and consistently cured across the entire printed transfer**. Improper or uneven curing may contribute to spotting, poor adhesion, peeling, or inconsistencies in the finished design.
- Store DTF transfers in a **clean, dry environment** and protect them from excessive humidity and moisture before use.
- Do not attempt to correct a poorly or improperly cured DTF transfer by simply applying **additional heat or pressure to the product**.
- Always follow the DTF transfer manufacturer's recommendations for **temperature, pressure, dwell time, and hot, warm, or cool peel**.

Protect Handles, Straps & Components

- To help prevent **scorching, melting, discoloration, or heat damage**, keep handles and straps **tucked inside the bag and away from the heat source whenever possible**.

- Keep webbing, zippers, buckles, plastic hardware, hook-and-loop closures, and other heat-sensitive components away from direct heat whenever possible.
- Be especially cautious with **polypropylene, nylon, polyester webbing, PVC, coated materials, and plastic components**, as they may have different heat tolerances than the main body of the product.

Before Beginning Production

- Position the product **flat and evenly** on the printing or pressing surface.
- Keep seams, handles, zippers, pockets, and other raised areas away from the imprint area whenever possible.
- Make sure the artwork or transfer is **properly positioned and secured** to help prevent shifting or ghosting.
- Use the **lowest effective temperature and shortest dwell time** recommended for the specific material and decoration method.
- Always perform a **test decoration on the actual product or material swatch** before beginning a full production run.

IMPORTANT PRODUCT CARE

Do not machine wash or machine dry Liberty Bags products.

Machine washing and drying may cause **color bleeding, shrinkage, fabric distortion, or damage to stitching and construction.**

For best results, **spot clean only and allow to air dry.**



Suggested Sublimation Printing Instructions



Recommended Starting Point:

- **Temperature:** 400°F
- **Press Time:** 35–45 seconds
- **Pressure:** Light to Medium

These settings are intended as a **starting point only**. Sublimation equipment, inks, transfer papers, fabric construction, and production environments can vary and may affect the finished result.

For Best Results:

- Pre-press the product for approximately **3–5 seconds** to help remove excess moisture.
- Always perform a **test print** before beginning a full production run.
- Secure the transfer to help prevent movement and ghosting.
- Use protective paper above and below the printing area to prevent unwanted ink transfer.
- Adjust temperature, time, and pressure in small increments as needed to achieve the desired result.

IMPORTANT: These recommendations are general guidelines only. Always follow the specifications provided by your sublimation ink, transfer paper, and heat press manufacturers. Because equipment and production environments vary, testing is strongly recommended before beginning full production.

Liberty Bags 100% Cotton – Printing & Decoration Guidelines

Liberty Bags 100% cotton products can be decorated using a variety of methods, including **screen printing, DTF, heat transfers, and embroidery**.

Because inks, transfers, equipment, cotton construction, and production environments can vary, the following recommendations should be used as **general starting points only**. Always follow the specifications provided by your ink, transfer, and equipment manufacturers.

GENERAL PRODUCT PREPARATION

Before decorating, make sure the imprint area is:

- **Clean and completely dry**
- Free of dust, lint, oils, or debris
- **Flat and free of wrinkles or creases**
- Properly positioned for even pressure and decoration

Cotton can naturally **absorb and retain moisture** during storage, shipping, or exposure to humidity—even when it feels dry to the touch.

For heat-applied decoration, **pre-press for approximately 3–5 seconds** to help remove excess moisture and wrinkles.

If visible steam or moisture is released, allow the product to cool briefly and repeat a short pre-press if necessary.

Do not apply a heat transfer until the decoration area is completely dry.

DTF – DIRECT TO FILM

Suggested Starting Range:

- **Temperature:** 255°F–320°F*
- **Press Time:** 7–15 seconds*
- **Pressure:** Medium
- **Pre-Press:** 3–5 seconds
- **Peel:** **COOL PEEL**, unless otherwise specified by the transfer manufacturer

The temperature and time ranges reflect differences between DTF transfer systems. They are not intended to suggest that every transfer will work throughout the entire range.

DTF Transfer Preparation

Before application, inspect the transfer for:

- Uneven adhesive powder
- Moisture or contamination
- Spotting or visible inconsistencies
- Damaged areas
- Uneven or improperly cured adhesive

The DTF adhesive powder must be properly and evenly cured before application.

Improper curing may contribute to **spotting, inconsistent adhesion, peeling, or irregularities within the finished design.**

Do not attempt to correct an improperly cured transfer by simply increasing the heat, pressure, or press time.

Cool Peel

After pressing, allow the transfer to **cool completely before removing the carrier film** when using a cool-peel transfer.

Once cooled, peel the carrier slowly and evenly.

If your DTF transfer is specifically designed for a hot or warm peel, follow the transfer manufacturer's instructions.

Final Press

After removing the carrier film, cover the design with a clean finishing sheet or parchment paper.

A typical starting point is a **3–5 second final press at medium pressure**, or according to the transfer manufacturer's specifications.

SCREEN PRINTING

100% cotton is generally **very well suited for screen printing.**

- **Plastisol Ink:** A common choice for cotton products.
- **Water-Based Ink:** May also be used and can provide a softer-hand print depending on the product and ink system.

- **Discharge Ink:** May be suitable for certain dyed cotton products; always test first, as results can vary depending on the dyes used.

Plastisol Curing

- Standard plastisol inks commonly require the **entire ink deposit to reach approximately 320°F**, although the required cure temperature varies by ink formulation.
- Low-cure plastisol systems may cure at approximately **270°F–300°F**.

Always follow the specific ink manufacturer's cure specifications.

Do not determine proper curing based solely on the dryer's temperature setting or a fixed amount of time. The **entire ink deposit must reach the manufacturer's required cure temperature**.

Screen Printing Recommendations

- Make sure the fabric is **clean, dry, and free of wrinkles** before printing.
- Allow printed products to cool before stacking or packaging.
- Test the finished print for proper cure and adhesion before beginning full production.

HEAT TRANSFER VINYL / HEAT-APPLIED TRANSFERS

100% cotton is generally compatible with a wide variety of heat-applied transfers.

- **Suggested Starting Range:** Approximately **280°F–320°F**, depending on the transfer or vinyl being used.
- Use the **lowest effective temperature and shortest dwell time** recommended by the transfer manufacturer.
- Pressure will vary depending on the transfer system.
- Follow the manufacturer's instructions for **hot, warm, or cool peel**.

Before Application

- Pre-press approximately **3–5 seconds** to remove moisture and wrinkles.
- Make sure the product is completely dry before positioning the transfer.
- Secure the transfer to prevent shifting or ghosting.

If additional adhesion is required and the transfer manufacturer permits it, a **short second press** may be preferable to significantly increasing the temperature or first press time.

EMBROIDERY

100% cotton bags and other cotton products are generally **well suited for embroidery**.

- Use an appropriate **tear-away or cut-away stabilizer/backing** based on the weight and construction of the product.
 - Select the appropriate needle and thread for the fabric and design.
 - Avoid designs that are excessively dense, as they may cause **puckering, distortion, or unnecessary stress on the fabric**.
 - Keep embroidery away from seams, zippers, pockets, handles, and other raised or reinforced areas whenever possible.
 - Avoid excessive hoop tension, which may distort the fabric or leave impressions.
 - Always perform a **test sew-out** before beginning full production.
-

SUBLIMATION

Traditional dye sublimation is NOT recommended for 100% cotton products.

Sublimation dye is designed to permanently bond with **polyester fibers or a compatible polyester coating**. Because 100% cotton does not contain polyester, standard sublimation will not provide the same permanent, vibrant result achieved on polyester.

Specialty sublimation coatings or transfer products designed specifically to allow sublimation-style decoration on cotton may be available; however, those systems should be treated as a separate transfer process and used according to the manufacturer's instructions.

GENERAL PRINTING & DECORATION TIPS

- Always perform a **test decoration on the actual product or material swatch** before beginning full production.
- Make sure the product is **clean, dry, flat, and wrinkle-free** before decorating.
- Remove excess moisture before applying heat.
- Keep handles and straps **tucked inside the bag and away from direct heat whenever possible**.
- Keep zippers, buckles, webbing, plastic hardware, hook-and-loop closures, and other components away from the heat source whenever possible.
- Remember that handles, straps, coatings, hardware, and other components may have **different heat tolerances than the cotton body of the product**.

- Avoid placing seams, handles, pockets, zippers, or other raised areas directly under the heat press, as they may create uneven pressure.
 - Allow decorated products to **cool completely before stacking or packaging**.
 - When troubleshooting, change only **one variable at a time**—temperature, time, pressure, pre-press, ink, or transfer—to help identify the source of the problem.
-

 IMPORTANT – PLEASE READ BEFORE PRINTING

These printing and decoration recommendations are intended as general starting points and troubleshooting guidelines only.

Inks, DTF films, adhesive powders, heat transfers, curing processes, equipment, cotton fabrics, and production environments can vary significantly.

Always follow the specifications provided by your ink, transfer, adhesive, thread, and equipment manufacturers.

If a manufacturer's specifications differ from the recommendations in this guide, **the manufacturer's specifications should take priority.**

Liberty Bags strongly recommends testing a small quantity of products or a material swatch before proceeding with a full production run.

Liberty Bags



75% Recycled Cotton/ 25% Recycled Polyester

SCREEN PRINTING

- **Recommended Ink:** Plastisol or water-based ink formulated for cotton/polyester blends.
- A **low-cure / low-bleed plastisol ink** is recommended, particularly on darker colors, to help reduce the possibility of dye migration.
- **Starting Cure Range:** Approximately **270°F–300°F** when using a compatible low-cure ink system.
- Standard plastisol inks may require higher curing temperatures. Always follow the specific ink manufacturer's cure requirements.
- Make sure the **entire ink deposit reaches the manufacturer's required cure temperature** for proper curing.

DTF – DIRECT TO FILM

- **Starting Temperature:** Approximately **275°F–300°F** when using a low-temperature DTF transfer suitable for cotton/poly blends.
- **Press Time:** Approximately **8–12 seconds as a starting point**, depending on the transfer system.
- **Pressure:** Light to Medium, or according to the transfer manufacturer's specifications.
- **Peel:** **Cool/Cold Peel is recommended** unless the transfer manufacturer specifically recommends a hot or warm peel.

IMPORTANT – PROPERLY CURE THE DTF TRANSFER:

- Before application, make sure the DTF transfer has been **properly and evenly cured according to the transfer manufacturer's specifications**.
- The adhesive powder must be completely and consistently cured across the entire transfer.
- Improper curing of the transfer may contribute to **spotting, uneven adhesion, peeling, or inconsistencies within the finished design**.
- Do not attempt to compensate for an improperly cured transfer by simply increasing the heat or press time on the product.

PRE-PRESS / MOISTURE REMOVAL

- Cotton and recycled cotton fibers can **retain moisture**, which may affect the finished decoration.
- **Pre-press the product for approximately 3–5 seconds** before applying a heat transfer to help remove excess moisture and wrinkles.
- If visible steam or moisture is released during the pre-press, allow the material to cool briefly and repeat a short pre-press if necessary.
- Make sure the material is **dry and flat before positioning the transfer**.

- Avoid excessive pre-pressing, which may unnecessarily expose the polyester fibers to heat.

HEAT TRANSFER VINYL

- Use heat-transfer vinyl suitable for **cotton/polyester blends**.
- **Starting Temperature:** Approximately **280°F–300°F** when using a compatible low-temperature HTV.
- Use the lowest effective temperature and shortest dwell time recommended by the vinyl manufacturer.
- Follow the manufacturer's instructions for pressure and hot, warm, or cool peel.

EMBROIDERY

- This material is generally **well suited for embroidery**.
- Use appropriate backing/stabilizer based on the weight and construction of the product.
- Avoid overly dense designs that could cause puckering or distortion.
- Always perform a **test sew-out** before beginning production.

SUBLIMATION

- **Not recommended as a primary decoration method.** Because the material contains only **25% polyester**, sublimation will primarily bond to the polyester fibers.
- The finished imprint may have a **faded, distressed, or vintage appearance** rather than the bright, solid colors normally associated with sublimation.

ADDITIONAL RECOMMENDATIONS

- Always perform a **test print or transfer on the actual material** before beginning a full production run.
- Recycled fibers may have natural variations in **texture, weave, color, and surface characteristics**, which may affect the finished imprint.
- Use the **lowest effective temperature and shortest effective dwell time** whenever possible.
- Check darker colors for **dye migration after the product has completely cooled and rested**.
- Allow decorated products to **cool completely before stacking or packaging**.

IMPORTANT These recommendations are intended as general starting guidelines only. Recycled materials can vary in fiber content, texture, weave, color, moisture content, and surface characteristics. Always follow the ink, transfer, and equipment manufacturer's specifications and test the decoration process on the actual material before beginning full production.

600D Polyester - Suggested Printing & Decoration Guidelines

SCREEN PRINTING

- **Ink:** Low-cure / low-bleed plastisol ink formulated for polyester is recommended.
- **Cure Temperature:** Approximately **270°F–300°F**, depending on the specific ink being used.
- Cure only long enough for the **entire ink film to reach the ink manufacturer's required cure temperature.**
- Conveyor dryer temperature and belt speed will vary depending on the ink system and equipment.
- Avoid excessive heat and prolonged dryer exposure to help reduce the risk of **dye migration, scorching, discoloration, or damage to coatings/backings.**
- Allow the product to **cool completely before stacking or packaging.**

DTF – DIRECT TO FILM

- **Recommended Starting Temperature:** **250°F–285°F** for heat-sensitive polyester.
- **Press Time:** Approximately **5–10 seconds as a starting point**, depending on the transfer system.
- **Pressure:** Light to Medium, or as specified by the transfer manufacturer.
- **Peel:** **Cool/Cold Peel is recommended** unless the DTF transfer manufacturer specifically calls for a hot or warm peel.
- Allow the transfer to cool before removing the carrier film.
- If a second press is required, keep it **short and at the lowest effective temperature** recommended by the transfer supplier.
- Avoid excessive heat to help reduce the possibility of dye migration, press marks, discoloration, or damage to coatings/backings.

EMBROIDERY

- 600D polyester is generally **well suited for embroidery.**
- Use an appropriate **tear-away or cut-away backing/stabilizer** to properly support the material and design.
- Polyester embroidery thread is recommended for durability, although other embroidery threads may be suitable depending on the application.
- Avoid overly dense designs that may cause **puckering, distortion, or unnecessary stress on the fabric.**
- Do not hoop the material excessively tight, as this may leave permanent hoop marks or distort the fabric.
- Whenever possible, avoid embroidering directly over **seams, zippers, pockets,**

webbing, or heavily padded areas.

- Always perform a **test sew-out** before beginning full production.

DYE SUBLIMATION

- Sublimation may be suitable for **compatible 600D polyester products**, particularly white or light-colored material.
- Because 600D polyester may contain **coatings, backing materials, or other components that are sensitive to heat**, a universal temperature and press time is not recommended.
- Standard polyester sublimation temperatures can approach **390°F–400°F**, which may be too hot for certain finished 600D products.
- **Always test at the lowest effective temperature and time** recommended by the sublimation ink/transfer manufacturer.
- Use light to medium pressure and avoid prolonged heat exposure.
- Sublimation is generally best suited for **white or light-colored polyester**, as sublimation ink is transparent and does not provide a white under base.
- Check the test product for **discoloration, scorching, dye migration, fabric distortion, press marks, and damage to coatings or backing materials** before proceeding with production.

GENERAL RECOMMENDATIONS

- Always perform a **test print or decoration test on the actual product** before beginning a full production run.
- Use the **lowest effective temperature and shortest effective dwell time** whenever possible.
- When additional heat is required and the decoration system allows it, multiple shorter presses may be preferable to one prolonged heat application.
- Avoid pressing directly over seams, zippers, pockets, webbing, or other raised areas.
- Allow decorated products to **cool completely before stacking or packaging**.
- Check for **dye migration after the product has cooled and rested**, as migration may not always be immediately visible.

IMPORTANT These recommendations are intended as general starting guidelines only. 600D polyester materials can vary significantly in dyes, coatings, backing materials, construction, and heat sensitivity. Ink, transfer, sublimation, and embroidery systems also have different application requirements. Always follow the ink, transfer, thread, and equipment manufacturer's specifications and test the decoration process on the actual product before beginning full production.

210 Denier Nylon & 70 Denier Nylon – Suggested Printing Guidelines

SCREEN PRINTING / INK

- Use a **screen-printing ink specifically formulated for nylon** or other coated synthetic fabrics.
- When using plastisol, a **nylon-compatible low-cure ink or nylon bonding additive** may be required for proper adhesion.
- Always follow the ink manufacturer's recommendations for coated or water-resistant nylon.

DRYER / CURING

- **Low-Temperature Starting Point:** Approximately **250°F–280°F** when using an ink specifically formulated for low-temperature curing.
- **Standard Nylon Ink:** Some ink systems may require temperatures around **300°F–325°F** for proper curing. Follow the specific ink manufacturer's requirements.
- Use the **lowest effective curing temperature and shortest dryer exposure time** possible.
- If using a conveyor dryer, adjust the belt speed so the ink reaches its required cure temperature without unnecessarily overheating the nylon.
- Avoid prolonged exposure to high heat, particularly with **70 Denier Nylon**, which is lightweight and more susceptible to heat damage.

HEAT TRANSFER / DTF

- Heat-applied transfers and DTF may be suitable when using transfers specifically designed for **nylon and heat-sensitive fabrics**.
- **Starting Temperature:** Approximately **250°F–280°F** when permitted by the transfer manufacturer.
- Use **light to medium pressure** and the shortest recommended dwell time.
- Follow the transfer manufacturer's instructions for **hot, warm, or cool peel**.
- Always test adhesion before beginning production, as some nylon fabrics have coatings that can make transfer adhesion difficult.

ADDITIONAL RECOMMENDATIONS

- Always perform a **test print or transfer on the actual product** before beginning a full production run.
- Be especially cautious with **70D nylon**, due to its lighter weight and increased sensitivity to heat.
- Nylon products may have **water-resistant or other surface coatings** that can affect ink and transfer adhesion.

- Avoid excessive heat and pressure, which may cause **shrinking, wrinkling, scorching, discoloration, melting, or permanent press marks**.
- Allow the product to cool completely before stacking or packaging.
- Check the finished decoration for **adhesion, cracking, peeling, discoloration, and fabric distortion**.

IMPORTANT: 250°F–280°F is intended as a low-temperature starting range only when using inks or transfers specifically formulated to cure or adhere at those temperatures. Never reduce the curing temperature below the ink or transfer manufacturer's specifications, as this may result in improper curing or poor adhesion.

Nylon materials can vary significantly in weight, coatings, dyes, and heat sensitivity. Always follow the ink, transfer, and equipment manufacturer's specifications and test the decoration process on the actual product before beginning full production.

Liberty Bags Towels – Printing & Decoration Guidelines

Liberty Bags towels are available in a variety of materials, including **100% cotton, polyester/cotton blends, and 100% polyester**. Recommended decoration methods and heat settings will vary depending on the fiber content, construction, color, and texture of the towel.

Always confirm the towel's fiber content before selecting a decoration method.

EMBROIDERY – RECOMMENDED FOR ALL THREE

Embroidery is one of the **best decoration methods for cotton, cotton/polyester, and polyester towels**.

- Use an appropriate backing/stabilizer based on the towel's weight and construction.
- For terry or looped towels, a **water-soluble topping is highly recommended**. This helps keep stitches above the towel loops and creates a cleaner, more defined design.
- Avoid extremely small lettering and fine details that may become lost in the towel's texture.
- Avoid overly dense designs that may cause puckering, distortion, or excessive stiffness.
- Keep embroidery away from hems, seams, grommets, hooks, and other reinforced areas whenever possible.
- Avoid excessive hoop tension, which may stretch or distort the towel.
- Always perform a **test sew-out** before beginning full production.

100% COTTON TOWELS

Screen Printing

- Plastisol or water-based inks formulated for cotton may be used.
- **Water-based ink** can be a good option when a softer-hand print is desired.
- Standard plastisol typically requires the entire ink deposit to reach approximately **320°F**, although cure requirements vary by ink.

- Low-cure plastisol systems may cure around **270°F–300°F**.
- Always follow the ink manufacturer's required cure temperature.

DTF / Heat Transfers

- **Starting Temperature:** Approximately **275°F–320°F**, depending on the transfer system.
- **Press Time:** Approximately **7–15 seconds**, depending on the transfer.
- **Pressure:** Medium, or according to the transfer manufacturer.
- **Pre-Press:** Approximately **3–5 seconds** to help remove moisture.
- Follow the transfer manufacturer's instructions for **hot, warm, or cool peel**.
- When using a cool-peel DTF transfer, allow the transfer to **cool completely before removing the carrier film**.

Sublimation

Traditional dye sublimation is NOT recommended for 100% cotton towels.

Sublimation dye requires polyester fibers or a compatible polyester coating to permanently bond.

COTTON / POLYESTER BLEND TOWELS

Screen Printing

- Use plastisol, water-based, or other inks specifically recommended for **cotton/polyester blends**.
- A **low-cure / low-bleed ink** is recommended, particularly on darker colors, to help reduce dye migration.
- **Low-Cure Starting Range:** Approximately **270°F–300°F**, when using an ink specifically designed to cure at those temperatures.
- Avoid unnecessary heat exposure, particularly on heavily dyed towels.

DTF / Heat Transfers

- Use transfers designed for **cotton/polyester blends**.

- **Starting Temperature:** Approximately **275°F–300°F** when using a compatible low-temperature transfer.
- **Press Time:** Approximately **7–12 seconds as a starting point**, depending on the transfer system.
- Pre-press approximately **3–5 seconds** to help remove excess moisture.
- Use light to medium pressure and follow the transfer manufacturer's peel instructions.
- On darker colors, consider a transfer designed to help **block dye migration**.

Sublimation

Sublimation results will depend heavily on the **percentage of polyester** in the towel.

- The higher the polyester content, the stronger and more vibrant the sublimated image will generally appear.
- Lower-polyester blends will typically produce a **softer, faded, or vintage appearance**.
- Sublimation is generally best on **white or very light-colored towels**.
- Always test before production.

100% POLYESTER TOWELS

Screen Printing

- Use ink specifically formulated for **polyester or synthetic performance fabrics**.
- **Low-cure / low-bleed plastisol ink is recommended** to help reduce dye migration.
- **Starting Cure Range:** Approximately **270°F–300°F** when using a compatible low-cure ink.
- Avoid excessive heat and prolonged dryer exposure, which can increase the potential for dye migration.
- On darker colors, check the finished print for **dye migration after the towel has completely cooled and rested**.

DTF / Heat Transfers

- Use a DTF or heat transfer specifically designed for **polyester and heat-sensitive synthetic fabrics**.
- **Starting Temperature:** Approximately **250°F–285°F** when permitted by the transfer manufacturer.
- **Press Time:** Approximately **5–10 seconds as a starting point**.
- **Pressure:** Light to Medium.
- Use a **dye-blocking transfer** when appropriate for darker or heavily dyed polyester.
- Follow the transfer manufacturer's instructions for hot, warm, or cool peel.
- If using a cool-peel transfer, allow it to **cool completely before removing the carrier film**.

Sublimation – RECOMMENDED

100% white or light-colored polyester towels are generally the best towel construction for dye sublimation.

- A typical polyester sublimation starting point may be approximately **385°F–400°F for 30–45 seconds**, depending on the towel and sublimation system.
- Use light to medium pressure.
- Make sure the towel is **completely dry before sublimating**.
- Secure the transfer to help prevent movement and ghosting.
- Use protective paper above and below the decoration area to prevent unwanted ink transfer.
- Allow the towel to cool before stacking or packaging.
- Always test the actual towel before production, as towel construction, finishes, and texture may affect the required time and temperature.

MOISTURE REMOVAL – IMPORTANT

Towels can retain a significant amount of **moisture from humidity, storage, and shipping**, even when they feel dry.

Before applying DTF, HTV, or other heat-applied decoration:

- Make sure the towel is **completely dry**.
- Pre-press approximately **3–5 seconds**, when appropriate for the material.
- If steam or visible moisture is released, allow the towel to cool briefly and repeat a short pre-press if necessary.
- Do not apply the transfer until the imprint area is **dry, flat, and wrinkle-free**.

DTF TRANSFER PREPARATION

Before application, inspect the DTF transfer for **moisture, contamination, spotting, uneven adhesive powder, or other inconsistencies**.

The DTF adhesive powder must be **properly and evenly cured before application**.

Improperly cured transfers may contribute to **spotting, poor adhesion, peeling, or inconsistencies in the finished design**.

Do not attempt to correct an improperly cured transfer by simply increasing the heat, pressure, or press time.

GENERAL RECOMMENDATIONS

- Always perform a **test decoration on the actual towel or material swatch** before beginning full production.
- Make sure the towel is **clean, completely dry, flat, and free of wrinkles, lint, oils, or debris**.
- Consider the towel's texture when selecting artwork. Very fine details and small lettering may not reproduce as cleanly on heavily textured or looped towels.
- Use the **lowest effective temperature and shortest dwell time** appropriate for the decoration system.
- Allow decorated towels to cool completely before stacking or packaging.
- Always follow the ink, transfer, sublimation, thread, and equipment manufacturer's specifications.

IMPORTANT PRODUCT CARE

Do not machine wash or machine dry Liberty Bags products.

Machine washing or drying may cause **color bleeding, shrinkage, fabric distortion, or damage to stitching and construction.**

For best results, **spot clean only and allow to air dry.**

IMPORTANT – PLEASE READ BEFORE PRINTING These recommendations are intended as general starting points and troubleshooting guidelines only.

Towel construction, fiber content, texture, dyes, moisture content, inks, transfers, embroidery equipment, and production environments can vary significantly.

Always confirm the fiber content and test the decoration method on the actual product before beginning a full production run. Manufacturer specifications for inks, transfers, sublimation materials, and equipment should always take priority.



Liberty Bags Alpine Fleece Blankets - Printing & Decoration Guidelines

Applies to **Alpine Fleece Micro Mink Sherpa Blankets, Alpine Fleece Mink Touch Luxury Blankets, and similar plush fleece blanket constructions.**

Because fleece, micro mink, sherpa, and other plush fabrics have a raised surface and can be sensitive to heat and pressure, decoration methods should be carefully selected and **tested on the actual product before production.**

EMBROIDERY – HIGHLY RECOMMENDED

Embroidery is the preferred decoration method for Alpine Fleece blankets.

Embroidery provides a professional, durable appearance without requiring the high temperatures associated with many heat-applied decoration methods.

Recommendations

- Use an appropriate **cut-away or tear-away stabilizer/backing** based on the blanket's construction.
- On micro mink, fleece, sherpa, or other high-pile surfaces, use a **water-soluble topping** to prevent stitches from sinking into the fabric.
- Medium-sized designs and lettering generally reproduce better than extremely small or highly detailed designs.
- Avoid excessively dense embroidery, which can cause **puckering, stiffness, or distortion.**
- A **magnetic frame or clamp system** may be preferable to a traditional hoop when possible to help reduce permanent hoop marks.
- If using a traditional hoop, use the **lowest tension necessary** to securely hold the blanket.
- Keep embroidery away from seams, binding, zippers, and excessively thick areas.
- Always perform a **test sew-out** before beginning full production.

DTF – USE WITH CAUTION

DTF may be possible on certain smooth fleece or micro mink surfaces, but **testing is strongly recommended.**

The combination of heat and pressure required for DTF can flatten the fleece pile and may create a **permanent press box or impression around the design**.

Suggested Starting Point

Temperature: Approximately **250°F–280°F** when using a low-temperature DTF transfer

Press Time: Approximately **5–10 seconds**

Pressure: Light

Peel: Follow transfer manufacturer's specifications; **cool peel when using a cool-peel transfer**

Use the **lowest effective temperature, shortest dwell time, and lightest pressure** that will properly adhere the transfer.

Important

- Do not assume standard cotton DTF settings are appropriate for fleece.
- Use a transfer designed for **polyester and heat-sensitive fabrics**.
- Avoid excessive pressure, which may permanently flatten the fleece.
- Test for **press marks, scorching, discoloration, dye migration, flattening, and adhesion**.
- Inspect the DTF sheet before application to make sure the adhesive powder has been **evenly applied and properly cured**.
- Allow the blanket to cool completely before evaluating the finished decoration.

HEAT TRANSFER VINYL – USE WITH CAUTION

Low-temperature HTV designed for **polyester, fleece, and heat-sensitive materials** may be suitable.

Suggested Starting Range

Temperature: Approximately **250°F–285°F**, when permitted by the HTV manufacturer

Pressure: Light

Time: Use the shortest dwell time recommended by the transfer manufacturer.

The primary concern is not only damaging the polyester—it is **flattening or crushing the fleece pile**.

Always test for:

- Permanent press marks
- Flattened fleece
- Discoloration
- Scorching
- Dye migration
- Poor adhesion
- Fabric distortion

A heat press pillow or appropriate platen setup may help isolate the decoration area and reduce unwanted impressions, depending on the product.

SCREEN PRINTING – LIMITED / TEST FIRST

Screen printing may be possible on some fleece constructions, particularly areas with a **shorter, smoother pile**, but it is generally not the first decoration method I would recommend for plush Alpine Fleece blankets.

The raised fibers can make it difficult to achieve a clean, consistent ink deposit.

If screen printing:

- Use an ink formulated for **polyester or synthetic fleece fabrics**.
- Consider **low-cure / low-bleed ink** to reduce heat exposure and dye migration.
- A low-cure system around **270°F–300°F** may be appropriate when specifically supported by the ink manufacturer.
- Avoid excessive dryer temperature and dwell time.
- Designs with **larger, bolder elements** generally reproduce better than extremely fine details.
- Test for ink coverage, adhesion, dye migration, scorching, and changes to the fleece surface.

Always verify that the entire ink deposit reaches the ink manufacturer's required cure temperature.

LASER ENGRAVING – TEST FIRST

Laser engraving may create an attractive tonal or debossed appearance on certain polyester fleece materials.

However, results vary significantly depending on the fiber, pile height, color, backing, and construction.

Laser settings should never be assumed. Test on an actual product or material swatch first.

Laser engraving should only be performed by an experienced decorator familiar with synthetic fleece materials.

SUBLIMATION – GENERALLY NOT RECOMMENDED On for Alpine Fleece Blankets

Although many fleece blankets contain polyester, **traditional sublimation is generally not recommended as a standard decoration method for finished Alpine Fleece blankets.**

Sublimation typically requires temperatures approaching **385°F–400°F**, which may flatten, distort, discolor, or otherwise alter plush fleece and micro mink surfaces.

Sublimation may also only be suitable on white or very light polyester material.

Do not assume that a blanket is suitable for sublimation simply because it contains polyester.

MOISTURE & PRODUCT PREPARATION

Before applying any heat-based decoration:

- Make sure the blanket is **completely dry**.
- Make sure the decoration area is clean and free of lint, oils, debris, and loose fibers.
- Use a lint roller if necessary.
- If a pre-press is required, use the **shortest possible time and lowest appropriate pressure** to avoid flattening the fleece.
- If moisture or steam appears, allow the material to cool and dry before decorating.

Do not repeatedly pre-press plush fleece at high temperature or pressure.

RECOMMENDED DECORATION ORDER

1. EMBROIDERY – BEST / PREFERRED

2. LOW-TEMPERATURE DTF OR HTV – TEST FIRST

3. SCREEN PRINTING – LIMITED; TEST FIRST

4. LASER ENGRAVING – SPECIALTY OPTION; TEST FIRST

5. SUBLIMATION – GENERALLY NOT RECOMMENDED

** IMPORTANT – HEAT & PRESSURE WARNING**

Plush fleece, micro mink, and sherpa materials can be permanently affected by heat and pressure.

Excessive heat, pressure, or dwell time may cause **flattening, press marks, scorching, discoloration, dye migration, shrinkage, melting, or permanent changes to the texture of the fabric.**

Always test the actual blanket before beginning full production. Use the lowest effective temperature, shortest dwell time, and lightest pressure permitted by the decoration system.

IMPORTANT PRODUCT CARE: Do not machine wash or machine dry Liberty Bags products. Machine washing and drying may cause color bleeding, shrinkage, fabric distortion, or damage to stitching and construction. For best results, spot clean only and allow to air dry.

LIBERTY BAGS SUBLIMATION BLANKETS

Liberty Bags offers specific blankets designed for sublimation decoration:

- **PSB3040/300F – Sublimation Fleece Baby Blanket**
- **PSB3040/300ST – Sublimation Silk Touch Baby Blanket**
- **PSB5060F – Sublimation Brushed Fleece Blanket**
- **PSB5060MS – Sublimation Micro Mink Sherpa Plush Blanket**
- **PSB5060ST – Sublimation Silk Touch Blanket**

These products are specifically intended for sublimation decoration and should be used when a full-color sublimated blanket is desired.

SUGGESTED SUBLIMATION STARTING GUIDELINES

Because sublimation inks, transfer papers, heat presses, and blanket constructions can vary, always follow the sublimation system manufacturer's recommendations.

A general starting point for Liberty Bags sublimation blankets is:

Temperature: Approximately **385°F–400°F**

Press Time: Approximately **30–45 seconds**

Pressure: Light to Medium

Peel: Remove transfer paper carefully according to the sublimation paper manufacturer's instructions.

Before Sublimating

- Make sure the blanket is **completely dry** before pressing.
- Remove lint, loose fibers, dust, or other debris from the decoration area. A clean lint roller may be helpful.
- Keep the blanket smooth and flat without unnecessarily compressing the fleece or plush surface.
- Secure the sublimation transfer to help prevent movement and **ghosting**.
- Use clean protective paper above and below the decoration area to prevent unwanted ink transfer to the heat press or other areas of the blanket.
- Replace protective paper between presses if any sublimation ink has transferred onto it.

Heat & Pressure

Use the **lowest effective temperature, shortest dwell time, and lightest pressure** that produces proper sublimation.

Excessive heat or pressure may cause:

- Flattening of fleece or plush fibers
- Press marks
- Fabric distortion
- Scorching or discoloration
- Changes in the texture or hand of the blanket

Do not automatically increase pressure to improve color. Adjust temperature, dwell time, pressure, and transfer preparation carefully and change only one variable at a time when troubleshooting.

After Pressing

Remove the transfer paper carefully to prevent ghosting.

Allow the blanket to **cool completely before folding, stacking, or packaging.**

Once cooled, inspect the decoration for:

- Color consistency
- Ghosting
- Press marks
- Scorching or discoloration
- Fabric flattening or distortion

IMPORTANT – NOT ALL POLYESTER BLANKETS ARE SUBLIMATION BLANKETS

Do not assume a Liberty Bags blanket can be sublimated simply because it contains polyester.

For traditional dye sublimation, Liberty Bags recommends using products specifically identified as **Sublimation Blankets**, including:

PSB3040/300F • PSB3040/300ST • PSB5060F • PSB5060MS • PSB5060ST

Standard Alpine Fleece and other finished polyester blankets that are **not specifically designated for sublimation should be tested carefully and are not recommended for traditional high-temperature sublimation as a general decoration method.**

TEST BEFORE PRODUCTION

Always test a small quantity or material swatch before proceeding with a full production run.

Sublimation inks, transfer papers, heat presses, temperature calibration, environmental conditions, and blanket construction can affect the final result.

If your sublimation ink, paper, or equipment manufacturer's specifications differ from these guidelines, follow the manufacturer's specifications.



Twill Aprons 70% Polyester 30% Cotton

SCREEN PRINTING

- **Ink:** Plastisol ink formulated for polyester/cotton blends.
- A **low-cure / low-bleed plastisol ink** is recommended, particularly on darker colors, to help reduce dye migration.
- **Low-Temperature Starting Range:** Approximately **270°F–300°F** when using an ink specifically formulated for low-temperature curing.
- Standard plastisol inks may require temperatures around **320°F–350°F**. Always follow the specific ink manufacturer's cure requirements.
- Make sure the **entire ink deposit reaches the manufacturer's required cure temperature** for proper curing.
- Avoid excessive heat and prolonged dryer exposure, which can increase the potential for dye migration.

DTF – DIRECT TO FILM

- **Starting Temperature:** Approximately **275°F–300°F** when using a low-temperature DTF transfer suitable for polyester/cotton blends.
- **Press Time:** Approximately **8–12 seconds as a starting point**, depending on the transfer system.
- **Pressure:** Light to Medium, or according to the transfer manufacturer's specifications.
- **Peel: Cool/Cold Peel is recommended** unless the transfer manufacturer specifically recommends a hot or warm peel.
- Make sure the DTF transfer has been **properly and evenly cured before application**.
- If additional adhesion is required, use a **short second press** rather than significantly increasing the temperature or dwell time.

PRE-PRESS / MOISTURE REMOVAL

- Pre-press for approximately **3–5 seconds** before applying a heat transfer to help remove excess moisture and wrinkles.
- If visible steam or moisture is released, allow the material to cool briefly and repeat a short pre-press if necessary.
- Make sure the apron is **dry and flat before positioning the transfer**.

HEAT TRANSFER VINYL

- Use HTV suitable for **polyester/cotton blends**.
- **Starting Temperature:** Approximately **280°F–300°F** when using a compatible low-temperature vinyl.

- Use the lowest effective temperature and shortest dwell time recommended by the vinyl manufacturer.
- Follow the manufacturer's recommendations for pressure and **hot, warm, or cool peel**.

EMBROIDERY

- Twill aprons are generally **well suited for embroidery**.
- Use appropriate backing/stabilizer to support the fabric and design.
- Avoid overly dense designs that could cause puckering or distortion.
- Avoid embroidering directly over seams, pockets, or other raised areas whenever possible.
- Always perform a **test sew-out** before beginning full production.

SUBLIMATION

- Because the material contains **70% polyester**, sublimation may produce good results on **white or light-colored aprons**, but testing is strongly recommended.
- The 30% cotton content will not accept sublimation dye in the same way as polyester, so the finished image may have a **slightly softer or vintage appearance** compared with 100% polyester.
- Sublimation temperatures are generally higher than other decoration methods and may increase the potential for **dye migration, scorching, press marks, or discoloration**.
- Always test the actual apron before production and follow the sublimation ink/transfer manufacturer's specifications.

ADDITIONAL RECOMMENDATIONS

- Always perform a **test print or transfer on the actual product** before beginning a full production run.
- On darker colors, use **low-bleed ink or transfers designed to help block dye migration**.
- Check for dye migration **after the apron has completely cooled and rested**, as migration may not always appear immediately.
- Use the **lowest effective temperature and shortest effective dwell time** whenever possible.
- Allow decorated products to cool completely before stacking or packaging.

IMPORTANT These recommendations are intended as general starting guidelines only. Polyester/cotton twill fabrics can vary in dyes, construction, finishes, and heat sensitivity. Always follow the ink, transfer, sublimation, and equipment manufacturer's specifications and test the decoration process on the actual product before beginning full production.

Chill Cooling Towels

Suggested Printing Guidelines

SCREEN PRINTING

- **Ink:** Use an ink specifically formulated for **polyester or synthetic performance fabrics**.
- **Low-cure / low-bleed plastisol ink** is recommended, particularly on darker colors, to help reduce dye migration.
- **Low-Temperature Starting Range:** Approximately **270°F–300°F** when using an ink specifically formulated for low-temperature curing.
- Standard plastisol inks may require higher curing temperatures. Always follow the specific ink manufacturer's cure requirements.
- Avoid using **350°F as a universal setting**, as excessive heat may affect certain cooling-towel materials.
- Make sure the entire ink deposit reaches the ink manufacturer's required cure temperature.

DTF – DIRECT TO FILM

- Use a DTF transfer designed for **polyester and heat-sensitive performance fabrics**.
- **Starting Temperature:** Approximately **275°F–300°F** when permitted by the transfer manufacturer.
- **Press Time:** Approximately **8–12 seconds as a starting point**.
- **Pressure:** Light to Medium.
- **Peel: Cool/Cold Peel is recommended** unless otherwise specified by the transfer manufacturer.
- Make sure the DTF transfer has been **properly and evenly cured before application**.
- If additional adhesion is required, use a **short second press** rather than significantly increasing the temperature or dwell time.

PRE-PRESS / MOISTURE REMOVAL

- Make sure the towel is **completely dry before decorating**.
- If necessary, use a **short 2–5 second pre-press** to help remove excess moisture.
- If steam or moisture is released, allow the towel to cool and dry before applying the decoration.
- Avoid excessive pre-pressing or pressure, which may flatten or affect the texture of the material.

HEAT TRANSFER

- Use heat-transfer material specifically designed for **polyester or performance fabrics**.
- Use the **lowest effective temperature, pressure, and dwell time** recommended by the

transfer manufacturer.

- Test for adhesion and flexibility after the towel has completely cooled.

SUBLIMATION

- Sublimation may be suitable for **white or light-colored polyester chill towels** when the specific material is sublimation-compatible.
- Always follow the sublimation ink/transfer manufacturer's temperature and time recommendations.
- Because sublimation requires higher heat, **testing is strongly recommended** to make sure the towel maintains its texture, shape, and cooling properties.

ADDITIONAL RECOMMENDATIONS

- Always perform a **test print or transfer on the actual towel** before beginning full production.
- Use the **lowest effective temperature and shortest dwell time** possible.
- Avoid excessive pressure, which may leave permanent press marks or affect the towel's texture.
- Check darker colors for **dye migration after the towel has completely cooled and rested**.
- Make sure the finished decoration remains **flexible** and does not negatively affect the performance or feel of the towel.
- Allow towels to **cool completely before stacking or packaging**.

IMPORTANT Chill/cooling towel materials can vary in fiber content, construction, dyes, moisture retention, and heat sensitivity. These recommendations are intended as general starting guidelines only. Always follow the ink, transfer, and equipment manufacturer's specifications and test the decoration process on the actual product before beginning full production.

PVC Plastic/ Clear Bags - Suggested Decoration Methods



Recommended Decoration Methods:

- **Screen Printing – PVC/Vinyl Ink**

Use an ink specifically formulated for flexible PVC or vinyl. Many PVC/vinyl inks are air-dried and provide good adhesion while remaining flexible.

- **Screen Printing – Low-Cure Plastisol Ink**

Low-cure plastisol may be used when specifically formulated for lower-temperature curing. A starting cure temperature of approximately **275°F** may be appropriate depending on the ink manufacturer's specifications.

- **Adhesive Vinyl / Stickers / Decals**

Pressure-sensitive vinyl decals or adhesive stickers can be applied to PVC products. Test the adhesive on the actual material before production to ensure proper adhesion and to check for any reaction with the PVC.

- **UV / UV-LED Screen Printing**

Certain UV and UV-LED inks are formulated for PVC and flexible vinyl. This can provide another option where compatible printing equipment and inks are available.

- **Sandblasting / Abrasive Decoration – TEST FIRST**

Sandblasting or abrasive techniques should only be considered after testing on the specific PVC material. Abrasion may cause clear PVC to become cloudy, scratched, weakened, or permanently damaged and may not be suitable for softer or flexible PVC products.

Drying / Curing

- **PVC/Vinyl Ink:** Air dry according to the ink manufacturer's recommendations.
- **Low-Cure Plastisol:** Approximately **275°F**, or according to the ink manufacturer's recommended cure temperature and dwell time.
- **UV/UV-LED Ink:** Cure according to the ink and equipment manufacturer's specifications.
- Avoid excessive heat whenever possible, as PVC can **soften, shrink, warp, discolor, or distort**.

Additional Recommendations

- Always perform an **adhesion and compatibility test** on the actual product before beginning production.
- Clean the printing surface as recommended by the ink or adhesive manufacturer before decorating.

- Allow inks and adhesives to **fully cure or set before stacking or packaging**.
- Avoid stacking freshly printed PVC products while they are still warm or tacky.
- Because PVC formulations and plasticizer levels vary, an ink or adhesive that works on one PVC product may not perform the same way on another.
- Test the finished decoration for **adhesion, scratching, flexibility, and blocking** before approving production.

IMPORTANT: PVC materials can vary significantly in formulation, flexibility, plasticizer content, and heat sensitivity. These recommendations are intended as general starting guidelines only. Always test the decoration method on the actual product and follow the ink, adhesive, and equipment manufacturer's specifications before beginning full production. Excessive heat or incompatible inks, adhesives, or solvents may permanently damage PVC material.

Foam Can Holders - Suggested Printing & Decoration Guidelines



SCREEN PRINTING / INK

- Use a **screen-printing ink specifically formulated and tested for flexible foam or synthetic materials.**
- Specialty solvent-based inks may be suitable depending on the type and surface of the foam.
- **Plastisol Ink:** A compatible **low-cure plastisol ink** may be used when specifically recommended for the foam material.
- Always test ink compatibility and adhesion on the actual product before beginning production.

DRYING / CURING

Air-Dry Ink:

- Allow the print to **dry completely according to the ink manufacturer's specifications** before stacking or packaging.
- Some inks may feel dry to the touch before achieving full adhesion or cure. Allow adequate curing time before performing adhesion testing.

Low-Cure Plastisol:

- **Starting Temperature:** Approximately **250°F–280°F** when using an ink specifically formulated for low-temperature curing.
- Keep heat exposure as short as possible while still allowing the entire ink deposit to reach the manufacturer's required cure temperature.
- Allow the product to **cool completely before stacking or packaging.**

DTF / HEAT TRANSFERS

- DTF or heat transfers may be suitable when using a transfer designed for **low-temperature application on heat-sensitive materials.**
- **Starting Temperature:** Approximately **250°F–275°F**, when permitted by the transfer manufacturer.
- Use a **short press time and light pressure** to minimize compression or damage to the foam.
- Follow the transfer manufacturer's instructions for **hot, warm, or cool peel.**
- Avoid prolonged or repeated heat applications whenever possible.

SUBLIMATION – WHITE CAN HOLDERS

- **White foam can holders are suitable for sublimation.**
- **Suggested Starting Temperature:** Approximately **350°F–375°F**.
- **Suggested Starting Press Time:** Approximately **20–30 seconds**.
- Use **light to medium pressure** to avoid permanently compressing the foam.
- Pre-press only if necessary to remove moisture, and keep the pre-press **very short** to minimize unnecessary heat exposure.
- Secure the sublimation transfer to help prevent movement and ghosting.
- Use protective paper to prevent unwanted ink transfer to the heat press.
- Remove the transfer carefully after pressing and allow the can holder to **cool flat** before stacking or packaging.
- If the desired color is not achieved, adjust the **time and temperature gradually** rather than making a large increase at once.

ADDITIONAL RECOMMENDATIONS

- Always perform a **test print or transfer on the actual product** before beginning a full production run.
- Foam is sensitive to both **heat and pressure**. Excessive heat may cause shrinking, melting, discoloration, or distortion.
- Excessive pressure may **compress the foam or leave a permanent impression**.
- Allow printed products to dry, cure, and cool completely before stacking or packaging.
- Test finished decoration for **adhesion, flexibility, cracking, scratching, rubbing, and distortion**.

IMPORTANT Foam materials can vary significantly in composition, density, surface coating, and heat sensitivity. Sublimation recommendations apply specifically to white, sublimation-compatible can holders. These settings are intended as starting guidelines only. Always follow the ink, transfer, sublimation, and equipment manufacturer's specifications and test the decoration process on the actual product before beginning full production.

High-Density Neoprene - Suggested Printing & Decoration Guideline

SCREEN PRINTING

- **Ink:** Low-cure / low-bleed plastisol ink is recommended when possible.
- **White Polyester / Low-Bleed Ink:** Recommended on darker colors to help reduce **dye migration** into the printed design.
- Always verify that the ink selected is compatible with neoprene.

DRYER / CURING

- **Low-Temperature Starting Point:** Approximately **270°F–280°F** when using an ink specifically formulated for low-temperature curing.
- **Standard Plastisol:** May require approximately **320°F**, depending on the specific ink manufacturer's cure requirements.
- Always use the **lowest effective cure temperature and shortest exposure time** possible.
- The entire ink deposit must reach the ink manufacturer's required cure temperature for proper curing.
- Avoid excessive or prolonged heat, which may cause neoprene to **shrink, distort, discolor, scorch, or become permanently compressed**.
- Allow the product to cool completely before stacking or packaging.

HEAT TRANSFER / HEAT SEAL

- **Starting Temperature:** When the transfer system allows, begin around **270°F–280°F** for heat-sensitive neoprene.
- Use transfers specifically designed for **heat-sensitive synthetic materials**.
- Use the lowest recommended temperature, pressure, and dwell time necessary to achieve proper adhesion.
- Always test for adhesion, discoloration, compression, or surface damage before production.

EMBROIDERY

- Embroidery may be used on high-density neoprene.
- A **clamp or magnetic frame is recommended instead of a traditional hoop** when possible to help prevent permanent impressions or compression marks.
- Use appropriate backing/stabilizer to support the embroidery.
- Avoid overly dense designs that may cause puckering or distortion.
- Always perform a **test sew-out** before beginning full production.

ADDITIONAL RECOMMENDATIONS

- Screen printing, heat-applied decoration, and embroidery can all be suitable decoration methods when properly tested.

- Always perform a **test decoration on the actual product** before beginning full production.
- Avoid excessive heat **and pressure**, as neoprene may retain permanent press or compression marks.
- Check for **dye migration, discoloration, shrinkage, distortion, adhesion, and permanent impressions** after the product has completely cooled.

IMPORTANT: 270°F–280°F is intended only as a low-temperature starting range when using inks or transfers specifically designed to work at those temperatures. Never lower the curing temperature below the ink or transfer manufacturer's specifications simply to protect the material, as this may result in improper curing or poor adhesion.

Neoprene materials can vary in thickness, density, surface fabric, dyes, and heat sensitivity. Always test the decoration process on the actual product before beginning full production.

Heavyweight Polypropylene – Suggested Printing Guidelines

SCREEN PRINTING / INK

- Use an ink specifically formulated for **polypropylene or other low-surface-energy plastics**.
- **Plastisol Ink:** A compatible low-temperature plastisol system may be used when specifically recommended for polypropylene.
- When using a specialty ink system, follow the ink manufacturer's recommendations regarding **additives, catalysts, or adhesion promoters**. Do not add modifiers unless recommended by the ink manufacturer.
- Always test ink adhesion on the actual product before beginning production.

DRYER / CURING

Because polypropylene can be sensitive to excessive heat, use the **lowest effective cure temperature and shortest exposure time** permitted by the ink manufacturer.

- **Black Material:** A starting point of approximately **245°F** may be used with a compatible low-temperature ink system.
- **Other Colors:** A starting point of approximately **285°F** may be used with a compatible low-temperature ink system.
- When using a conveyor dryer, approximately **12–15 seconds under the heating elements** may be used as an initial equipment setting; however, belt speed and dryer temperature should be adjusted so the **ink itself reaches the manufacturer's required cure temperature** without overheating the polypropylene.
- Allow the product to **cool completely before stacking or packaging**.

ADDITIONAL RECOMMENDATIONS

- Always perform a **test print and adhesion test** before beginning a full production run.
- Keep heat exposure as low and brief as possible.
- Polypropylene can **shrink, warp, melt, become brittle, or distort** when exposed to excessive heat.
- Surface treatments and coatings can affect ink adhesion, so an ink that works on one polypropylene product may not perform identically on another.
- Avoid excessive dryer temperatures in an attempt to speed production; adjusting **belt speed and dwell time** may provide better control.
- After the product has completely cooled, test the print for **adhesion, scratching, cracking, and flexibility**.

IMPORTANT The temperatures above are intended as starting guidelines only and should only be used with inks specifically designed to perform at those temperatures. The ink manufacturer's required cure temperature must always be achieved for proper curing and adhesion.

Polypropylene materials can vary in construction, surface treatment, coatings, color, and heat sensitivity. Always test the printing and curing process on the actual product before beginning full production.

Vinyl and Heat Transfer Guideline

- **Standard Starting Point:** Approximately **300°F–350°F**, depending on the vinyl and material being decorated.
- For heat-sensitive fabrics, use a **low-temperature heat transfer vinyl** whenever possible.
- Apply for approximately **5 seconds as an initial press** when permitted by the vinyl manufacturer.
- If additional adhesion is needed, allow the material to cool and apply a **second short press of approximately 5 seconds** rather than significantly increasing the temperature or extending the first press.
- Use **light to medium pressure**, or as recommended by the vinyl manufacturer.
- Follow the vinyl manufacturer's instructions for **hot, warm, or cool peel**.
- Avoid excessive heat, pressure, and dwell time, which may cause **scorching, discoloration, shrinkage, melting, press marks, or fabric distortion**.
- Always perform a **test application** on the actual product before beginning full production.

IMPORTANT: 350°F should be considered a maximum starting reference, not a required temperature. Whenever possible, use the lowest temperature and shortest press time that provides proper adhesion. Always follow the specific heat-transfer vinyl manufacturer's application instructions.