# FABRICS & FASHIONS

By Jim Kirby, DLI Textile Analyst

## Fused Interfacings

### General Information

Interfacing materials that are coated with an adhesive and then attached to a shell fabric with heat and pressure are known as fused interfacings. Interfacings are used to give a garment shape, body, and stability. In most cases, only certain sections of a garment use interfacings, such as, the collar, cuffs, plackets, shoulders, lapels, jacket fronts, pocket flaps, waistbands, etc. Fusible materials can be made from almost any type of fiber, including cotton, rayon, reinforced paper, wool, hair fibers, nylon, and polyester. Fusible facing fabrics can be woven, knitted, or non-woven.

To achieve a durable bond between the materials fused together so the original appearance will last for a reasonable period of time in use and repeated care, high quality control measures are a must by the manufacturer. The binder, the fusible facing, and the shell fabric must all be compatible. Also, cutting procedures of the shell fabric panels and the interfacing material must be precise so they align correctly prior to fusing. After cutting and applying the bonding agent, the pieces are then positioned together and just the right amount of heat and pressure are needed to alter the chemistry of the adhesive and form the bond. When all of these steps are undertaken correctly a durable fusible is formed that will last for the entire life expectancy of the garment through many wearings and repeated cleaning and pressing.

### Possible Problems

- One of the biggest concerns with fusible construction is lack of permanent fabric component bonding. Insufficient time, temperature and pressure used for the fusing process can create poor adhesion. All materials must be compatible and the proper adhesive for the fabrics must be used. If these materials aren't tested and constructed properly, fusible separation and fabric blistering could be the result from just normal use and later proper professional care.
- The bonding adhesive may soften or dissolve in drycleaning solvents or melt from heat during pressing and thus leach through the shell fabric and leave glue stains on the surface.
- Some form of pre-shrinkage method in manufacture must stabilize both the interfacing fabric and the shell fabric, so that neither material shrinks objectionably in the accepted cleaning process. If one or both fabrics shrink in cleaning, then adverse distortion and puckering may result.

### Initial Inspection

If a fusible is beginning to fail and come apart, it may not be possible to satisfactorily restore it by any special finishing process. Therefore, it is advisable that if anyone at the counter, during marking-in or during "spot" inspection and classification notices any interfacing bubbling prior to cleaning or washing the customer should be notified. The customer should be made aware that the distortion could get worse during the care procedure and you may not be able to fix the problem.

### STAIN REMOVAL:

- **Dryside** – Some fusible adhesives can soften in strong dryside spotters, such as paint, ink or glue removers, so test first and use sparingly. If these agents are needed, then work rapidly and flush out immediately with volatile dry solvent and dry up with air and vacuum on the board.
- **Wetside** – Excessive moisture is the enemy to many fusibles, so use minimal moisture in wetside stain removal and dry very thoroughly before cleaning.
- **Tools** – Use proper precautions when using spotting equipment, such as the steam-air gun, tamping brushes, and spatula. Minimize all mechanical action so as not to initiate fusible bond separation.

**DRYCLEANING:**

- **Cleaning Time** – Regular cleaning times for the load classification and the solvent used are appropriate. However, soft low twist wools and other identified delicates should be cleaned for only 3-5 minutes in stronger solvents and no more than 6-8 minutes in milder solvents. This will limit both mechanical action and chemical action in order to protect the overall fashion and also help prevent early breakdown of fusible interfacings.
- **Drying** – It is recommended that normal loads should be dried at 140°F (60°C), but any load identified for special care, such as those mentioned above, should only be dried at 115°F (45°C).

**Caution:** To help prevent fusible separation and shrinkage, stringent moisture controls are mandatory in the cleaning machine. A proper ratio of drycleaning detergent and moisture is necessary at all times to maintain a solvent relative humidity of 70-75%.

**WETCLEANING:**

- On garments that can be wet cleaned, use cold water, mild detergent, and short, gentle cycle. Air-dry or warm cabinet dry or if appropriate, tumble dry low temperature.
- Washable shirts that contain interfacings should be professionally processed using normal commercial methods. Damage to fusible facings used in areas of such shirts cannot be predicted or prevented.

**FINISHING:**

- **Equipment** – Use the press or iron appropriate for the garment, such as a steam-air finisher, tensioning equipment, utility press, or iron when needed. Use minimal steam, pressure, and vacuum on areas that contain a fusible interfacing.
- **Temperature** – Use only temperatures that are safe for the shell fabric and fashion style. It's best to set irons at low temperatures below 250°F (120°C). We don't want to melt any fusible adhesive or glaze any fabrics.
- **Laundry Shirts** – Process normally because predicting a shirt fusible problem on any specific shirt is impossible.
- **Restoration of A Bubbled Fusible** – Sometimes, separated and puckered fusible fabrics can be temporarily re-fused and smoothed out enough to wear again. Using a utility press, soften the area with bottom steam for 5 seconds then stretch and smooth out the fabric as best as possible. Lower the press head and apply pressure for 5 seconds. Then apply vacuum for one second and lift the press head. Continue applying vacuum for 15 more seconds or until the fabric itself feels "cold" to the touch. Although this method will work in many cases, it can cause shine and seam impressions on some fabrics and finishes.

## Conclusion

Wearable garments should have care instructions and all components used in the make-up of any fashion must be compatible with these instructions. Whether the garment is a drycleanable or a washable item, any areas of fusible construction must be made to withstand repeated use and the suggested care process without any failures. The professional cleaner must be guided by the recommended care instruction. The cleaner does need to be conscious of garments constructed with fusible interfacings and process these items according to style, construction methods, trims, and fabric type using their expertise and experience. However, only pretesting by manufacturers and durable methods of construction prior to fashion distribution will avoid any future interfacing problems.