

# Textile Testing and Analysis

## 100% Cotton for Pressing Hams

### Product End Use & Marketplace Requirements

Pressing Hams are ironing tools that are used for the pressing of curved and/or difficult to reach areas of garments that are in the construction process. Pressing hams are firm pillow like structures that are oval in shape and tend to be made one side of wool, and the other side of a cotton fabric.

The fabric we chose is one hundred percent cotton and is intended to be used for the cotton side of the pressing ham which will be required to withstand very high temperatures. It will be used in high temperature environments with repeated pressing. The fabric used to make pressing hams should be durable and able to withstand repeated exposure to high heat, and abrasion. The fabric should be resistant to ripping and tearing due to the fact that some consumers will tend to use the pressing ham like a pin cushion to store pins, or in order to keep the fabric they are pressing from slipping from the pressing ham.

### Original Fabric Sample 100% Cotton

#### Fabric Characteristics

**Fabric Weight:** 3.092 oz/ square yd

**Yarn size:** 82.41 hanks/pds

**Fabric type:** woven

**Ends and picks/inch:** 60 /in

**Fabric Width:** 45"

**Type of Selvage:** machine

**Fabric Thickness:** 0.009 in

**Fiber Content of Yarns:** 100% cotton

**Type of Dye:** piece dyed

### Product Specifications

Characteristic	Requirements	Results	Pass/ Fail
Breaking Strength (CRE)			
Warp Direction	308 N (72 lbf), min	377.7 N	Pass
Weft Direction	308 N (72 lbf), min	232.7 N	Fail
Tongue Tear Strength (CRE)			
Warp Direction	13 N (3 lbf), min	23.2 N	Pass
Weft Direction	13 N (3 lbf), min	23.5 N	Pass
Abrasion Resistance	Class 4 <sup>A</sup> , min		Pass
Colorfastness:			
Crocking:			
Dry	Class 4 <sup>C</sup> , min	class 5	Pass
Water:			
Shade Change	Class 4 <sup>A</sup> , min	class 5	Pass
Staining	Class 4 <sup>B</sup> , min	class 4	Pass
Light (20 AATCC FU)	Step 4 <sup>A</sup> , min	2.5	Fail
Flammability			
Warp Direction	7 seconds, min	12.5sec	Pass
Weft Direction	7 seconds, min	11.05 sec	Pass

### Fabric Analysis

For most of the tests that were conducted, they showed that the 100% cotton that was chosen for the end product of Pressing Hams was an acceptable choice but probably not the best choice. In some cases like the tensile tests, the warp passed but the weft did not, but since the fabric would be stretched out in both directions and all seams would be sewn into the ham it is not as important. Even though the fabric did not pass some tests, the fabric would work for pressing hams but a good pressing ham would require more of a durability fabric so it would last longer.