Kohl’s Home Textiles Appearance Evaluation
Requirements Procedures - AATCC/ASTM TS-008
Modified

Overview & Scope

Kohl’s Appearance Evaluation Procedures are performed to ensure that the after wash performance of finished products meet Kohl’s Customer’s expectations. This procedure will be used to evaluate the appearance of the finished products after repeated home launderings. Kohl’s Appearance Evaluation Procedure will determine the performance of a finished product that has undergone repeated home launderings by comparing it to an unwashed specimen and rating it against a set of Kohl’s requirements (standards).

Kohl’s requirements evaluate different aspects of the products to ensure that it retains its original appearance after multiple launderings. Some of the requirements evaluated in the procedure are Color Change, Handfeel, Pilling, Seam Puckering, etc. The full list of requirements can be found on the following pages.

Kohl’s Appearance Evaluation can be broken down into 2 categories: Finished Products without embellishments and Finished Products with embellishments. The breakdown into 2 categories has been done to ascertain that every possible characteristic is taken into account when evaluating different samples. An in-depth explanation of the 2 categories can be found on the following pages.

The 2 categories can be found in the following sections:

Kohl’s Appearance Evaluation Procedure – Finished products without Embellishments  Page  2

Kohl’s Appearance Extended (Durability) Evaluation Procedure –
Finished Products with Embellishments  Page  7
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Kohl’s Appearance Evaluation Procedure – Finished Products without Embellishments/Fragile Trims

Overview

The purpose of the Kohl’s Appearance Evaluation Procedure for finished products is to compare the before washed and unwashed products (original sample) to ensure that the after wash product meets Kohl's Customer's expectations and standards. For finished products, two products are submitted, in all colorways. Each colorway of the product is to be washed 3 times and dried 3 times (for Tier 2 or 3 products product should be washed 5 times and dried 5 times), according to the care label instructions approved for that product. The after wash appearance of that product is then compared to the unwashed product (original sample). Exception: Any finished product that is not machine washable will use the lab test results to evaluate the appearance requirements, such as leather or suede. See approved care instructions for the product.

Procedure for Finished Products without Embellishments

- Two finished products are submitted, in all colorways.
- Read the care label instructions carefully.
- Compare the finished products to each other, to confirm that they are identical.
- Launder 1 of the finished products according to the care label instructions, using approx. 44 grams of household detergent – American label Tide® Powder – Original Scent. Include 1 twin FLAT sheet, in 100% white cotton, to help balance the wash and dry load. Use a 4 lb. load for approx. 18 gallons of water, made up of the finished product and ballast. Dry. We recommend using 1 twin Flat sheet to reduce the potential of excessive wrinkling sometimes caused by a fitted sheet. The sheet may be used on multiple evaluations, as long as no color transfer has occurred.
- For care instructions that include machine wash with “mild detergent”, please proceed with using Woolite® detergent.
- Multiple specimen groupings may be included in a wash or dry cycle as long as the color family is complimentary and there are no “wash separately” instructions included in the care label instructions.
- Read the care label instructions carefully.
- Repeat the above wash and dry cycle 3 times (5 times if Tier 2 or 3 product), according to the care label instructions. (Wash/dry, wash/dry, wash/dry)
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Kohl’s Appearance Evaluation Procedure

Torque

Procedure for using the Side Seam method (AATCC/ASTM TS-004), see figure 1

1. After washing and drying, lay specimen flat and allow to condition for a minimum of 4 hours. The product should be gently smoothed and free of large wrinkles or creases. Begin smoothing at the top of the product and work down.
2. Using a marker pen, one skewing mark should be placed at the uppermost point of the product folded edge - point E and the other skewing mark should be placed at the lower most point of the same folded edge - point G.
3. Measure the distance from point F across to the nearest fold edge - point G.
4. Calculate the percentage of torque after wash as follows:

\[
\frac{\text{Line FG}}{\text{Line EG}} \times 100
\]

Figure 1

Skew

Procedure for using the AATCC test method 179-2004/Inverted T Method 2, Option 3, see figure 2

1. Using a marker pen, draw a reference line YZ across the width of the panel approximately 3 inches, above the bottom edge. Draw benchmark A perpendicular to and in the middle of YZ. Draw benchmark B, both perpendicular to YZ and parallel to A.
2. After washing and drying, lay specimen flat and allow to condition for a minimum of 4 hours. The product should be gently smoothed and free of large wrinkles or creases. Begin smoothing at the top and work down.
3. Draw a line from B to line YZ, following the grain line. Mark this intersection as C.
4. Measure the distance from A to C. Measure the distance from A to B.
5. Calculate the percentage of skewing after wash as follows:

\[
\frac{\text{Line AC}}{\text{Line AB}} \times 100
\]

Figure 2

Exception

Skew is not measured on those products that have a horizontal engineered stripe or wide horizontal stripes, over 3" in width. The horizontal stripe(s) is the predominant element of the product and the fabric must be cut and sewn with the stripe straight on the horizontal.
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Kohl’s Appearance Evaluation Requirements

Viewing Board

Observer - stand directly in front of the specimen 4-ft (+/- 1") away from the board. It has been found that normal variations in the height of the observer above and below the arbitrary 5-ft eye level have no significant effect on the grade given.

Supplies Required

- **Lighting** – 4 4-ft Sylvania bulbs CW (cool white) UL3500K 128 WATTS.
- **Board** – 6-ft X 6-ft (+/-1") piece of ¼" plywood for the front of the board and a 6-ft X 6.4” (+/-0.1") piece of ¼" plywood to mount the board so that the bottom is a 5 +/- 0.1 degree angle (see diagram).
- **Paint** – After mounting, paint the 6-ft X 6-ft plywood board to match No. 2 gray chip in the AATCC gray Scale for Staining.
Appearance Requirements for Finished Products **without** Embellishments/Fragile Trims

The following appearance requirements are to be compared between the washed and unwashed product (original sample). The performance rating observed using a standard, such as the Gray Scale or a visual observation, must be entered on the Kohl’s KAR worksheet on the line in front of each appearance requirement. **All observations are to be made by comparing the washed and unwashed product and using the performance standard indicated.**

<table>
<thead>
<tr>
<th>Observation</th>
<th>Definition</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appliqués, buttons or trim items securely attached</td>
<td>Visual observation that all appliqués, buttons and trim items are securely attached after wash.</td>
<td>Observation results are Pass, Fail, or N/A.</td>
</tr>
<tr>
<td>Needle Cuts or Chews</td>
<td>Visual observation for any evidence of needle cuts or chews after wash.</td>
<td>Observation results are Pass, Fail, or N/A.</td>
</tr>
<tr>
<td>Raveled Edges</td>
<td>Visual observation for any evidence of raveled edges after wash.</td>
<td>Observation results are Pass, Fail, or N/A.</td>
</tr>
<tr>
<td>Seam Pucker</td>
<td>Kohl’s Seam Smoothness Standard – AATCC Photographic Seam Smoothness Replicas is compared to the product to verify that Kohl’s requirement has been met. This includes seam puckering on all split fronts, such as snap fronts, zipper fronts and button front products.</td>
<td>Observation results are Pass, Fail, or N/A with a rating. Seam Smoothness = 3.0 Evaluate product as is after wash, if excessive wrinkling – iron product as needed per care instruction and evaluate.</td>
</tr>
<tr>
<td>Color Bleeding/Self Staining</td>
<td>Visual observation of color transfer to another color or portion of the product using the Gray Scale for Evaluating Staining.</td>
<td>Gray Scale Rating: 4.5 or better</td>
</tr>
<tr>
<td>Color Staining (Multifiber test fabric)</td>
<td>Visual observation of color staining to another fiber using the Gray Scale for Evaluating Staining. Evaluate after 3 washes.</td>
<td>Gray Scale Rating: 3.0 or better</td>
</tr>
<tr>
<td>Excessive Color Change</td>
<td>Visual observation comparing the washed product to the unwashed product using the Gray Scale for Evaluating Change in Color.</td>
<td>Gray Scale Rating: 4.0 or better Prints/Pigment Dyed/Sulphur Dyed/Indigo Gray Scale Rating: 3.5 min</td>
</tr>
<tr>
<td>Excessive Wrinkling</td>
<td>Kohl’s Overall Smoothness Appearance Standard – AATCC 3D Smoothness Appearance Replicas is compared to the product to verify that Kohl’s requirement has been met.</td>
<td>Observation results are Pass, Fail, or N/A with rating. Smoothness Appearance = 3.5 Below requirement does not apply to Durable Press/Wrinkle Resistant Garments: Evaluate product as is after wash, if excessive wrinkling – iron product as needed per care instruction and evaluate.</td>
</tr>
</tbody>
</table>
## Appearance Requirements for Finished Products without Embellishments/Fragile Trims - Continuation

<table>
<thead>
<tr>
<th>Observation</th>
<th>Definition</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive Pilling</td>
<td>Visual observation comparing the washed product to the unwashed product using the ASTM D 3512 Photographic Standards for evaluating pilling.</td>
<td>Photographic Rating: 4 (Slight pilling or fuzzing) or better</td>
</tr>
</tbody>
</table>
| Torque/Skew                          | The side seam and AATCC 179-2004 Inverted T methods are used to verify that Kohl’s requirements have been met.                                                                                             | Wovens/Down Filled - 4% max                                                                                      
|                                      |                                                                                                                                             | Knits– 5% max.                                                                                                               |
|                                      | Observation results are indicated in %. (one decimal place, ex. 3.4% 2.4%)                                                                     | 100% cotton jacquard and product dyed knits – 7% max.                                                                          |
| Holes or other signs of excessive abrasion | Visual observation for any evidence of holes or other signs of excessive abrasion after wash.                                                                                                           | Observation results are Pass, Fail, or N/A.                                                                                                          |
| Hand feel                            | Physical evaluation to determine if the hand feel is the same as the before wash sample.                                                                                                               | Observation results are Pass, Fail, or N/A.                                                                                                          |
| Zippers or other trim items functioning properly | Physical inspection to determine whether or not all trim items are functioning properly.                                                                                                            | Observation results are Pass, Fail, or N/A.                                                                                                          |
| Filled Products                      | Visual observation for any evidence of fiber fill migration, voids in the fiber fill, or fiber fill penetrating through the surface.                                                                     | Observation results are Pass, Fail, or N/A.                                                                                                          |
| Coating of Metal Trims               | Visual observation for any loss of color or coating in metal trims using photographic image Fig. 1                                                                                                     | Observation results are Pass, Fail or N/A with a rating Class: 3                                                                                   |

**Figure 1**

![Images provided by YKK Corporation](https://example.com/image.png)
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Kohl’s Appearance Extended (Durability) Evaluation Procedure – Finished Products

Overview
The purpose of Kohl’s Durability Evaluation Procedure for finished products is to determine the appearance retention of the finished products after repeated home launderings. Products will undergo testing of Appearance after Three Home Launderings, as well as Durability evaluation for repeated home launderings to ensure that the samples retain their original appearance.

For finished products where durability testing is required, three finished products must be submitted. One sample will be retained as control. The second sample will be tested for Appearance After Three (3) or Five (5) Launderings. The remaining sample will be subjected to repeated home launderings per the item’s intended care instructions using the procedure outlined on the following page (Durability Evaluation). Therefore, products will undergo the following two procedures:

Procedure 1

- Two finished products are submitted, in all colorways.
- Read the care label instructions carefully.
- Compare the finished products to each other, to confirm that they are identical.
- Launder 1 of the finished products according to the care label instructions, using approx. 44 grams of household detergent – American label Tide® Powder – Original Scent. Use a 4 lb. load for approx. 18 gallons of water, made up of the product and ballast. Dry.
- For care instructions that include machine wash with “mild detergent”, please proceed with using Woolite® detergent.
- Repeat the above wash and dry cycle per the specified number of cycles below, according to the care label instructions. (wash/dry, wash/dry, wash/dry)
- Report the results by using the Extended (Durability) Evaluation appearance requirements. This reporting will be for the appearance of the product.

Procedure 2

<table>
<thead>
<tr>
<th>Children’s Products:</th>
<th>Machine Laundering: Perform 1 wash/dry cycle. Evaluate when dry. If satisfactory, repeat rotation and evaluate after the 5th cycle and 10th cycle. Completed procedure will consist of 10 wash/dry cycles and 3 evaluations unless failure occurs prematurely. The procedure should be stopped when failure occurs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine Laundering = 10 cycles</td>
<td></td>
</tr>
</tbody>
</table>
Procedure 2 - Continuation

**Adult's Products:**
- Machine Laundering = 5 cycles or as per the protocol
- Hand Laundering = 5 cycles
- Dry Cleaning = 1 cycle
- Spot Clean = 1 cleaning

**Machine or Hand Laundering:** Perform 1 wash/dry cycle. Evaluate when dry. If satisfactory, repeat wash/dry for 4 additional cycles. Evaluate after the 5th cycle. Completed procedure will consist of 5 wash/dry cycles and 2 evaluations unless failure occurs prematurely. The procedure should be stopped when failure occurs.

**Dry Cleaning:** Perform 1 dry clean cycle and evaluate.

**Spot Clean:** Perform 1 spot clean and evaluate.

**Appearance Requirements for Finished Products (Durability Evaluation)**

- Assess only the change in the appearance of the product against the control (original) sample. Report the changes using the below appearance requirements.

The following appearance requirements are to be compared between the washed and unwashed product (original sample). The performance rating observed using a standard, such as the Gray Scale or a visual observation, must be entered on the Kohl's worksheet on the line in front of each appearance requirement. **All observations are to be made by comparing the washed and unwashed product and using the performance standard indicated.**

<table>
<thead>
<tr>
<th>Observation</th>
<th>Definition</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appliqués, buttons or trim items securely attached</td>
<td>Visual observation that all appliqués, buttons and trim items are securely attached after wash.</td>
<td>Observation results are Pass, Fail, or N/A.</td>
</tr>
<tr>
<td>Color Bleeding/Self Staining</td>
<td>Visual observation of color transfer to another color or portion of the product using the Gray Scale for Evaluating Staining.</td>
<td>Gray Scale Rating: 4.5 or better</td>
</tr>
</tbody>
</table>
| Excessive Color Change                   | Visual observation comparing the washed product to the unwashed product using the Gray Scale for Evaluating Change in Color. | Gray Scale Rating: 4.0 or better  
  Prints/Pigment Dyed/Sulphur Dyed/Indigo  
  Gray Scale Rating: 3.5 min               |
| Peeling, Flaking, Cracking, or other evidence of delamination | Visual observation that no peeling, flaking, cracking or other evidence of delamination occurs in a screen print after wash. | Observation results are Pass, Fail, or N/A.         |
| Legibility of text                       | Visual observation that the text of a screen print is legible after wash. | Observation results are Pass, Fail, or N/A.         |
## Appearance Requirements for Finished Products - Continuation

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
<th>Observation Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detachment</td>
<td>Visual observation that no detachments of the decorative/embellished trims occur during the wash.</td>
<td>Observation results are Pass, Fail, or N/A.</td>
</tr>
<tr>
<td>Multiple broken stitches</td>
<td>Visual observation that no broken stitches are present in the decorative/embellished trims after wash.</td>
<td>Observation results are Pass, Fail, or N/A.</td>
</tr>
<tr>
<td>Color loss of trim or label</td>
<td>Visual observation comparing the color change of the washed item to the unwashed washed product and reporting whether there was any color loss.</td>
<td>Observation results are Pass, Fail, or N/A.</td>
</tr>
<tr>
<td>Change in sheen or gloss to the extent that a metallic finish no longer appears shiny</td>
<td>Visual observation that no change in the sheen or gloss of the metallic finish has occur after wash.</td>
<td>Observation results are Pass, Fail, or N/A.</td>
</tr>
<tr>
<td>Loss of surface texture</td>
<td>Physical observations to determine that the texture/handfeel of the washed item is the same as the original item.</td>
<td>Observation results are Pass, Fail, or N/A.</td>
</tr>
<tr>
<td>Softening or melting</td>
<td>Visual observation that no softening or melting of the screen prints or decorative/embellished items has occurred after wash.</td>
<td>Observation results are Pass, Fail, or N/A.</td>
</tr>
</tbody>
</table>
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**Kohl’s Appearance Evaluation Requirements Worksheet – AATCC/ASTM TS-008 Modified**

Date Tested ___________________________  Color ___________________________
Style Number ___________________________  Signature ___________________________

**APPEARANCE**

(PLEASE CHECK BOX FOR NUMBER OF WASHES)

☐ 3X  ☐ 5X (Tier 2 or 3 products only)

**Appearance** – Observation Results Are To Be Recorded As Pass Or Fail, except where the
gray scale/photographic standards are used and torque/skew %’s, which are indicated to one decimal
point (ex. 3.4% 2.4%)

- P ☐, F ☐, N/A ☐ **Appliqués, buttons or trim**
  items securely attached

  Grade _____ **Color bleeding/Self Staining**
  Gray scale 4.5 or better

  Grade _____ **Excessive Color Change**
  Gray scale 4 or better W/out Suppressor

  Grade _____ **Excessive Color Change**
  With Suppressor If below 4

  Grade _____ **Excessive Pilling**
  photographic standard 4 or better

  _____ **Torque/Skew**
  Indicate both results as %’s

- P ☐, F ☐, N/A ☐ **Needle cuts or chews**

- P ☐, F ☐, N/A ☐ **Raveled edges**

- P ☐, F ☐, N/A ☐ **Seam Pucker**

- P ☐, F ☐, N/A ☐ **Excessive Wrinkling**

- P ☐, F ☐, N/A ☐ **Holes or Other Signs of**
  Excessive Abrasion

- P ☐, F ☐, N/A ☐ **Zippers or Other Trim Items**
  Functioning Properly

- P ☐, F ☐, N/A ☐ **Handfeel Same as Before**
  Wash

- P ☐, F ☐, N/A ☐ **Filled Products - Fiber fill**
  Migration

- P ☐, F ☐, N/A ☐ **Color Staining**
  Gray scale 3.0 or better

  Grade _____ Acetate
  Grade _____ Cotton
  Grade _____ Nylon
  Grade _____ Polyester
  Grade _____ Acrylic
  Grade _____ Wool

**Overall Rating of Appearance: Pass or Fail**

**Additional Comments:** ___________________________________________________________
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Kohl’s Appearance Evaluation Requirements Extended (Durability) Evaluation

Date Tested__________________  Color ________________________
Style Number__________________  Signature____________________

**DURABILITY EVALUATION**
*(PLEASE CHECK BOXES FOR NUMBER OF WASHES)*

☐ 1X  ☐ 5X  ☐ 10X

- Color Bleeding/Self Staining
  Grade________
  Grey Scale: 4.5 or better

- Excessive Color Change
  Grade________
  Grey Scale: 4.0 or better

- Peeling, Flaking, Cracking or other Evidence of Delamination
- Legibility of Text
- Detachment
- Multiple Broken Stitches
- Color Loss of trim or label
- Change in sheen or gloss to the extent that a metallic finish no longer appears shiny
- Loss of surface texture
- Softening or Melting
  - P ☐, F ☐, N/A ☐
  - P ☐, F ☐, N/A ☐
  - P ☐, F ☐, N/A ☐
  - P ☐, F ☐, N/A ☐
  - P ☐, F ☐, N/A ☐
  - P ☐, F ☐, N/A ☐

Overall Rating of Durability Evaluation: Pass or Fail

Additional Comments: ________________________________
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Kohl’s Appearance Evaluation Procedures

Turnaround Time
For finished products without decorative/embellished trim items:
The above testing can be completed in 4 laboratory working days. Turn time is calculated from the day after approved testing lab receives the sample to the day the report is issued to the client.

For finished products with decorative/embellished trim items:
The above testing can be completed in 6 laboratory working days. Turn time is calculated from the day after approved testing lab receives the sample to the day the report is issued to the client.

Cost
Please refer to Kohl’s preferred third party labs for individual pricing.

Amount of Samples Needed

For finished products without decorative/embellished trim items: 2 finished products

For finished products with embellished trim items: 3 finished products

Dry cleaning Note: If the care instructions state “For best results, Dryclean”, then an additional finished product will need to be submitted along with the above amounts.

Required Materials to Complete Testing

1. American Washer and Dryer – It is recommended that AATCC approved brand names, such as Whirlpool or Kenmore is used. A current list of recommended model numbers can be found on AATCC's web site. [https://www.aatcc.org/testing/laundering/](https://www.aatcc.org/testing/laundering/)
2. Gray Scale. [https://members.aatcc.org/4DCGI/productinfo/Gray%20Scale.htm](https://members.aatcc.org/4DCGI/productinfo/Gray%20Scale.htm)
5. Kohl’s Seam Smoothness Standard. Standard included with this procedure.
6. Viewing Board – see supplies required below.
Wash Temperature
- Cold: 80 +/- 5°F
- Warm: 105 +/- 5°F
- Hot: 120 +/- 5°F

Wash Cycle
- Normal Cycle – 12 minute wash, 6 minute final spin
- Permanent Press Cycle – 10 minute wash, 4 minute final spin
- Delicate Cycle – 8 minute wash, 4 minute final spin

Dry Conditions:

When the care instructions call for ‘tumble dry low’, the temperature should be 140°F, +/- 5°.
- Tumble Dry Low – set heat temperature to Low
- Time setting – The below times are approximate. Allow the dryer to operate until the total load is dry.
  - Knits - approx. 45 minutes
  - Wovens – approx. 25 minutes
  - Denim – approx. 35 minutes

- After the product/specimens have completed the wash and dry requirements, lay flat and allow to condition for a minimum of 4 hours before evaluation. For products follow all care label instructions, including any ironing. If no ironing instructions are included, no ironing should be done. Kohl's preferred care instructions ‘when needed’ means whenever the average consumer would find it necessary to iron in order to be satisfied with the overall appearance or specifically if the product is a woven fabric. Hand iron weight is not to exceed 3 pounds.
- Hang both products on the viewing board. Standing 4 feet from the board, compare the after wash product appearance to the unwashed product, using the appearance performance requirements. Both front and back appearance is to be compared for products.

The overall rating of satisfactory or unsatisfactory is based upon all appearance requirement observations.
Kohl’s Appearance Evaluation Procedures

Revisions
3/15/21 – Added Revision section, added 5 x washes for Appearance Retention on Tier 2 and 3 products