



KOHL'S FABRIC DEVELOPMENT, TESTING & INSPECTION STANDARD OPERATING PROCEDURE (SOP) FOR APPAREL & HOME

Fabric Inspection General Guideline for all fabrics developed for Kohls

Purpose & Scope

This Fabric Development, Testing & Inspection SOP will ensure that all fabrics meet the Kohl's quality standards by outlining how to evaluate materials and prevent defects in the final product, while promoting communication between the fabric mill and manufacturer. This document is addressed to all parties that are involved in the final product.

Roles and Responsibilities

It is the (vendor)'s responsibility to ensure that the fabric is of good first quality and suitable for the intended product. Kohl's requires the vendor to have a method of fabric inspection. Together with its mill, the Kohl's (vendor) should ensure the fabric is carefully and systematically inspected prior to cutting in accordance with this Guideline.

Fabric Mill Responsibility

The mill must inspect 100% of the fabric shipment prior to delivery by the 4 point system. The vendor must inspect the fabric prior to cutting.

Final acceptance of the fabric is subject to approval by the vendor upon arrival at destination. The mill must provide the PO#, Itel #, Roll #, Color, Dye/Shade Lot# on each roll.

- New fabric developments must be sent to an authorized/certified third party testing laboratory based on the most current version of Kohl's Apparel Test Program Overview guide found on K-Link. The mill is responsible for execution of this process unless otherwise agreed to be executed by the vendor.
- All fabric developed for Kohl's Private & Exclusive Brands must be tested to **Kohl's Apparel Test Program Guide** as applicable to ensure that it meets minimum fabric performance, safety and regulatory standards. Refer to the **Denim SOP** in addition to all other standards when applicable. All of this documentation is available on K-Link.
- Kohl's requires the use of authorized and/or inhouse certified testing laboratories for fabric testing. No fabric should ship to a vendor/manufacturer without passing all test requirements or being approved by Kohl's, Inc.

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- Costs incurred for all phases of fabric testing are borne by the fabric mill or vendor. Retests and/or additional tests directed by Kohl's are also the responsibility of the mill or vendor.
- It is the responsibility of the mill for any shipping costs and mode of shipping in case the fabric fails the test and is redeveloped and retested.
- Kohl's reserves the right to increase testing requirements on a case by case basis should it be warranted. This would be agreed upon by Kohl's QA/PI and Global Materials Teams.

Recommended/Preferred Process For Inspection at the Mill

Fabric Mill

1. All rolls must be inspected by adhering to the 4 point system before shipment and making sure the full quantity meets Kohl's published testing requirements.
 - All mills need to do internal inspections on yarns/greige depending on the order quantity.
 - If the order quantity is over 100K yards , they will randomly do 10%-20% inspection based on the 4-point system.
 - If the random quantity passes, the mill will process the order accordingly
 - Otherwise, they will do 100% inspection or replace yarn /greige accordingly
 - All mills should check with the shade lot of bulk order quantity within 5 yds of each shade lot to check colors / do testing etc to make sure the quality meets Kohl's requirements.
2. Final acceptance of fabric is subject to approval by the vendor/manufacturer upon arrival at the destination. The mill must provide the PO#, Item#, Roll#, color, dye/shade lot# on each roll.
 - All mills should do their own internal 100% inspection of all rolls and the mill's QC/QA should do randomly 10%-20% rechecking based on the order quantity.
 - Relevant paper inspection reports or digital inspection reports should be saved by mill end for further checking upon request.

Vendor

Highly recommend that the vendor inspects fabric at the mill prior to shipping to the factory for production. This is to ensure that the product upon receipt meets passing 4 point inspection.

1. At least 10% of received rolls should be pulled for initial final inspection from each dye lot.

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2. If the shipment is rejected in the first inspection a second 10% inspection must be conducted.
3. If the overall 20% inspection is failing, the vendor/manufacturer can use the rejection rate as a basis to claim replenishment fabric.
4. At least 10% of received rolls must be pulled for KWIQ testing. If any fail for shrinkage, or other visible performance concern (i.e. skewing, colorfastness, etc.), the vendor/manufacturer should proceed to check shrinkage and other failures for 100% of the rolls in the shipment and the mill must replace or refinish the fabric found to be out of tolerance.
5. At least 10% of received rolls should be reviewed for color matching with the approved lab dip and approved shade band. If any failed roll(s) are found, a second 10% inspection should be conducted. If a failure is still found, 100% of the rolls should be checked. Rolls out of tolerance for shade should be returned to the mill for replenishment.
6. The vendor/manufacturer must assume responsibility once the fabric shipment is accepted and make certain the fabric quality is qualified to manufacture products that will meet Kohl's established standards.
7. The vendor/manufacturer should inform Kohl's Global Materials Team, QA/PI and Production within 2 days if an incoming fabric inspection failure occurs to understand delivery implications, if any.

Fabric claim for rejection

- No claims will be recognized after 10 working days of receipt of the fabric shipment or after cutting.
- All claims must be supported by a full inspection report which clearly identifies the defects by representative samples that are large enough to assess the extent of the problem.
- Claims should be settled between the **Vendor and mill without intervention from Kohl's**. Mill's must treat the garment maker as a direct customer and service the account accordingly.
- The mill must amicably resolve any quality problems and give a solution to the vendor/manufacturer and Kohl's within 2 working days upon receipt of a claim from the vendor/manufacturer. If not amicable, the mill should make every effort to visit the manufacturer and work towards a speedy resolution.
- Any delay in replenishment of fabric due to a defective shipment may result in a claim from a vendor/manufacturer facility or liability and air shipment charges would be the responsibility of the mill. A legitimate claim for these charges must be settled by the mill within 5 working days of agreeing to the claim.
- If fabric defects are found but the fabric is still usable by cutting around defects, the vendor/manufacturer and mill should align on proceeding. **Kohl's should not be impacted by any delay or cost due to these agreements.**



Disclaimer

Kohls will not be providing a list of potential fabric defects as they vary by material types and fabric construction but we have included some fabric types that are very unique to Kohls as below in the appendix.

Kohls encourages mills to purchase the ASTM D5430 norm which describes the fabric details and the correct terminology



Appendix

FABRIC INSPECTION | ASTM D5430 | MODIFIED | VISUALLY INSPECTING AND GRADING FABRICS | KOHL'S CORPORATION | July 2023

Inspection condition

- The overhead direct lighting source shall be mounted parallel to the viewing surface so as to illuminate with direct perpendicular impinging light rays. The surface illumination level shall be a minimum of 1075 lux.
- The light source shall be cool white preheat rapid start fluorescent lamps with white reflectors and without baffles or glues.
- The fabrics are to be inspected on an inspection machine at a speed compatible with the fabric quality, but should never exceed 25 yards per minute for solid colors and 15 yards per minute for printed/pattern fabrics.
- The fabric inspection quantity depends on the fabric types, about 1000 to 1500 yards per day.

Sampling

- With shipments which total 1000m or yd or less, inspect and grade the total number of rolls or bolts.
- For shipments exceeding 1000 m or yd, select samples per ISO 2859-1 or ANSI/ASQ Z1.4

Points assignment Option A (normally used)

- Defect length ≤ 3 in. (75mm), assigned penalty points =1
- Defect length > 3 in. (75mm) to 6 in. (150mm), assigned penalty points =2
- Defect length > 6 in. (150mm) to 9 in. (230mm), assigned penalty points =3
- Defect length > 9 in. (230mm), assigned penalty points =4

Notes

Assign no more than a total of 4 points to any one yard of fabric, regardless of the number or size of the detected individual defects.

Assign 4 points to each consecutive yard in which a continuous running defect exceeds 230 mm or 9 inches.

Assign 4 points to each yard of fabric where the usable width is less than the minimum specified.

Assign 4 points to each seam or other full width defect or seam if applicable.

Unless otherwise instructed, defects not visible on the face of the fabric shall not be counted.

Calculation:

- Calculate the points per 100 sq. yd or sq. m.

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- Points / 100 sq. yd = 3600 P/WL
- Points / 100 sq. m = 100000 P/WL
- Where
 - P = Total points assigned,
 - W = Cuttable fabric width in. or mm,
 - L = Fabric length examined, yd or m.
- Explanation on how coefficient 3600 or 100000 comes:
 - 1 yd = 36 in.
 - 1 m = 1000 mm

Fabric Inspection | ASTM D5430 - Standard test method for visually inspecting and grading fabrics

Advised acceptable “Penalty points per 100 sq. yd” – Group of fabrics

Group	Individual Roll	Shipment
A	14	10
B	20	16
C	25	20
D	30	25

Note

- **Group A:** basic denim (open end spun /12-16 oz), dress shirting, worsted woolens, synthetics, polyester, nylon, acetate, velour
- **Group B:** basic denim (ring spun /12-16 oz), light weight denim (4-8 oz), medium weight denim (9-12 oz), twill, canvas, poplin, chambray, oxford shirting, woolen spun, spun rayon, YD Woven (gingham, jacquard, seersucker, dobby), basic knitted fabric, stretch woven & knit, corduroy, velvet, velveteen
- **Group C:**, stretch denim / stretch fabric, silk fabrics,, slub knits, coated fabric (wax/pu on the face)
- **Group D:** linen, linen blends
- 1 point per 100 sq. m = 1.2 * (1 point per 100 sq. yd)

NOTE: Any exceptions to the above listed fabric grading specifications must be agreed to in writing between vendor / factory and fabric mill. Roll put-ups must also be agreed to in writing at the time the vendor / factory purchase order is placed with the mill.

Other checkpoints during inspection of fabric:

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- **Weight tolerance:** +/- 5%
- **Off shade: Visible difference from standard exceeding 4-5 on the greyscale**
 - Shading (end-to-end, side-to-side and roll-to-roll with a shade/dye lot.)
- **Bow / skew fabric tolerance:** Fabric bow or skew exceeding 2% for technical reasons must be agreed in writing between mill and vendor prior to the fabric purchase order being written.
 - Pattern, size and repeat
 - Narrow or excessive width variation
 - Loose or wavy fabric
 - Aesthetics (handfeel, thickness, brush/peach level & consistency, etc.)
- **Fabric length:** Maximum 2% short from the ordered quantity
- **Cutable Fabric width:** must be \geq contracted
- **Paper roll diameter:** 1.5 in. - 2.0 in.
- Third party laboratory development and bulk test reports available for review upon request
- Hand feel, smell checks, color fastness test, tearing resistance and seam slippage test, stretching test, color bleeding test, etc.