

Graphic Program SOP for Knits & Wovens

Kohl's Department Stores

Product Services

Graphic Programs – Standard Operating Procedure (SOP)

In order to ensure product quality, safety & regulatory standards are met, Kohl's requires that all apparel Knit or Woven programs with placed graphic screen prints or similar heat transfer techniques, be tested. Product(s) being tested must be representative of bulk quality, and all relevant testing must be complete prior to shipment. Depending on the age group to which the product is targeted, testing must be conducted in the following stages in conjunction with Test Protocol # 216:

1. Stage 1 – Blank Garment Testing
2. Stage 2 – Toxicology Testing
3. Stage 3 – Finished Garment Testing
4. Guidelines for Stage 3 Testing
5. Print on Demand Testing Requirements

1. Stage 1 – Blank GARMENT Testing (Applies to Adults & Kids)

All styles and colorways are subject to Stage 1 garment testing. No fabric testing is required; however, it is expected that the blank garment supplier has worked with the Fabric Mill to ensure that the fabric used to make the blank garment meets Kohl's performance requirements as set forth-in the fabric protocol. Blank T-shirt suppliers and/or garment vendors are responsible for ensuring that such garment testing is complete, prior to placement of graphic screen prints or similar heat transfer techniques. If the style is garment washed or has a special garment finish, testing should be conducted on the style after this process or wash has been applied.

1.1 Kohl's Style Number - Blank Garments which have not yet been assigned a Kohl's style #, should state the style # as "Kohl's/Tee/Month/Year" on the test request form and test report (i.e. "Kohl's/Tee/June/2019).

1.2 Kohl's Color Name - Blank Garments which have not yet been assigned a Kohl's color name the use of the vendor/mills internal color name is appropriate.

Below table outlines all details pertaining to Blank Garment Testing:

| What to Test? | Age Category | Criteria for Testing | Frequency of Testing | Tests to be conducted |
|-----------------------------------|--------------|--|----------------------|----------------------------|
| Blank Garment (Darkest Color) | Adults | Test every construction & fiber content | Every 12 months | Refer to test protocol 216 |
| Blank Garment (Additional Colors) | Adults | Each Additional colorway of every construction & fiber content | Every 12 months | Refer to test protocol 216 |
| Blank Garment (Darkest Color) | Kids | Test every construction & fiber content | Every 6 months | Refer to test protocol 216 |
| Blank Garment (Additional Colors) | Kids | Each Additional colorway of every construction & fiber content | Every 6 months | Refer to test protocol 216 |

** For number of samples required refer to protocol 216

** For pricing please refer to Kohl's preferred third party labs for individual pricing.

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2. Stage 2 – Toxicology Testing (Applies to Adult & Kids)

Toxicology testing is to be done on Adult and Kids garments. Vendors have the option of testing dyestuff, inks or any other topical heat set application at the beginning of the season. If colors are added after the start of the season, these colors will still need to be tested for toxicology. Spraying bands of inks etc., in every color to be used on the final garment, on fabric panels or finished garments (i.e. at Stage 3), for toxicology testing is acceptable. The recommended size for each band is 14" L x 2" W. Given below is an example of sprayed bands on fabric panels.

2.1 Kohl's Style Number - The colors tested in stage 2 may not have specific Kohl's style # associated at this early stage OR each color may relate to multiple Kohl's styles. Therefore, please state the style # as "Kohl's/Tox/Month/Year" (i.e. Kohl's/Tox/June/2019).

2.2 Kohl's Color Name - Colors which have not yet been assigned a Kohl's color name should be labeled as the vendor/mills internal color name on the test request form and test report.

Below are two examples of fabric panels with sprayed ink bands



2.3 Lead in Surface Coating (when applicable)

Composite testing on similar coatings is allowed on a maximum of 3 coatings with an 80% safety factor applied. For example, 3 different colorways of flocking materials can be composited, but NOT 1 foil, 1 shimmer and 1 flocking material.

"Pass" or "fail" criteria will be based on the number of colors within the composite.

- 1 coating - standard is 90 ppm
- 2 coatings - standard is 36 ppm (72/2)
- 3 coatings - standard is 24 ppm (72/3)

If the composite test result is greater than or equal to the standard, each individual surface coating must be tested individually to be sure the 90 ppm requirement is being met.

2.4 Lead in Substrate (when applicable – CHILDREN'S ONLY)

Composite testing on similar components is allowed on a maximum of 3 components/materials with an 80% safety factor applied.

"Pass" or "fail" criteria will be based on the number of colors within the composite.

- 1 component/material - standard is 100 ppm
- 2 components/materials- standard is 40 ppm
- 3 components/materials - standard is 27 ppm

If the composite test result is greater than or equal to the standard, each individual substrate must be tested individually to be sure the 100 ppm requirement is being met.

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2.5 Phthalates (when applicable)

Composite testing on similar components/materials is allowed on a maximum of 3 component parts/materials with an 80% safety factor applied.

“Pass” or “fail” criteria will be based on the number of colors within the composite.

- 1 component/material- standard is 1000 ppm (0.1%)
- 2 components/materials - standard is 400 ppm (0.04%)
- 3 components/materials - standard is 266 ppm (0.0266%)

If the composite test result is greater than or equal to the standard, each individual component/material must be tested individually to be sure the 1000 ppm requirement is being met.

| What to Test? | Age Category | Criteria for Testing | Frequency of Testing | Tests to be conducted |
|---------------|---------------|--|--|--|
| Toxicology | Adults & Kids | Test every color Ink, dye stuff, and/or application technique | Every 6 months (Can be sprayed & submitted on fabric panels) | Lead in Surface Coating, Lead in Substrate, Phthalates (when applicable) |

Note: For number of samples required refer to protocol 216. For pricing please refer to Kohl's preferred third party labs for individual pricing.

3. Stage 3 – Finished Garment Testing (Applies to Adults & Kids)

Garment testing should be conducted after the print has been applied and all garment washes/processes have been completed. **On Adults & Kids products, individually testing each design/pattern/screen of every style is required.** The graphic screen representing production must be finished garment and each Kohl's finished garment style # should be referenced. See garment grouping scenarios as examples. For every graphic submitted, the lab must have a control sample. For the number of samples, refer to protocol 216.

3.1 Blank Garment Testing: Blank Garment test results conducted in Stage 1 must be referenced by the supplier/vendor on the test request form, which in turn will be reference on the garment test report for record purposes.

3.2 Toxicology Testing: Toxicology results conducted in Stage 2 must be referenced by the supplier/vendor on the test request form, which in turn will be reference on the garment test report for record purposes.

| What to Test? | Age Category | Criteria for Testing | Frequency of Testing | Tests to be conducted |
|------------------|-------------------|--|----------------------|---|
| Finished Garment | Adults | Refer to Guidelines for Garment Testing in the following pages | Every 12 months | Durability Evaluation (5 home launderings), Label Verification WHEN APPLICABLE – Attachment Strength, Tracking Label, Toxicology (if previously not tested in Stage 2), pH Value |
| Finished Garment | Kids (sizes 4-20) | Refer to Guidelines for Garment Testing in the following pages | Every 6 months | Durability Evaluation (5 home launderings), Label Verification WHEN APPLICABLE – Attachment Strength, Tracking Label, Toxicology (if previously not tested in Stage 2), pH Value |

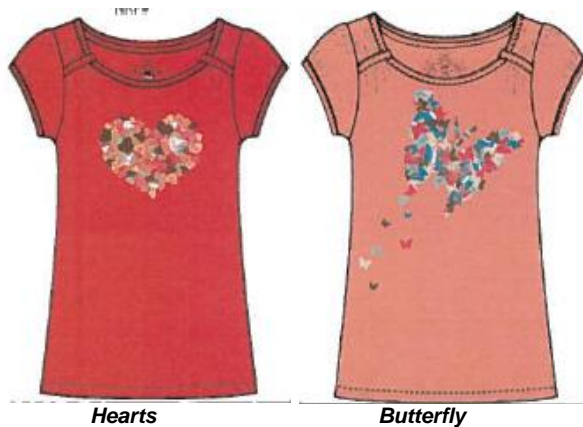
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| | | | | |
|------------------|-------------------|--|----------------|---|
| Finished Garment | Kids (sizes 0-4T) | Refer to Guidelines for Garment Testing in the following pages | Every 6 months | Durability Evaluation (10 home launderings), Label Verification WHEN APPLICABLE – Attachment Strength/ Small Parts, Sharp Points/Sharp Edges, Toxicology (if previously not tested in Stage 2), Tracking Label, pH Value |
|------------------|-------------------|--|----------------|---|

4. Guidelines for Garment Testing

4.1 Scenario 1 - One base fabric/fabrication (construction/content) & multiple graphics patterns but one application technique



Options for Garment Testing in above scenario:

1. Submit all 2 T's individually for testing – as would be sold in stores
2. Pick lightest color in assortment, apply up to a maximum of 6 graphics on 1 garment , without distorting shape, size or appearance (i.e. heart and butterfly both applied to the peach color T-shirt listing all 2 Kohl's style #'s)

Lab to conduct following tests:

Adults and Kids sizes 4-20

- Appearance Retention for Wash Durability (5 Home Launderings)
- Attachment Strength
- Label Verification
- Tracking Label Verification (kids sizes 4-20)
- Toxicology (if not tested previously in Stage 2)
- pH Value

Kids sizes 0 – 4T

- Appearance Retention for Wash Durability (10 Home Launderings)
- Attachment Strength/Small Parts
- Sharp Points & Sharp Edges
- Toxicology (if not tested previously in Stage 2)
- Label Verification
- Tracking Label Verification
- pH Value

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4.2 **Scenario 2** - Multiple base fabrics/fabrications (construction/content) and one graphic design one graphic technique

BLJ39101KA



Thermal

BLJ39121KA



Suede Jersey

Option for Garment Testing in above scenario:

1. Submit T's individually – as would be sold in stores

Lab to conduct following tests:

Adults and Kids sizes 4-20

- Appearance Retention for Wash Durability (5 Home Launderings)
- Attachment Strength
- Label Verification
- Tracking Label (kids sizes 4-20)
- Toxicology (if not tested previously in Stage 2)
- pH Value

Kids sizes 0 – 4T

- Appearance Retention for Wash Durability (10 Home Launderings)
- Attachment Strength/Small Parts
- Sharp Points & Sharp Edges
- Toxicology (if not tested previously in Stage 2)
- Label Verification
- Tracking Label
- pH Value

4.3 **Scenario 3: Example 1** -One base fabric/fabrication (construction/content), one or multiple graphic patterns and multiple techniques



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Option for Garment Testing in above scenario:

1. Testing all T's individually – as would be sold in stores
2. Pick lightest color in the assortment; apply up to a maximum of 6 graphics on 1 garment, without distorting shape, size, or appearance.
For this example: Total of 5 graphics, 5 techniques
 - 1.) Sick Hawk with flock applied to the front and Hawk Drop with Clear Crackle applied to the back of the light grey tee and tested.
 - 2.) Hawk Eye w/ Shimmer applied to the front and with Worn Down w/ crackle applied to the back of a light grey tee and tested.
 - 3.) Warhawk screen tested alone on light grey tee.

Lab to conduct following tests:

Adults and Kids sizes 4-20

- Appearance Retention for Wash Durability (5 Home Launderings)
- Attachment Strength
- Label Verification
- Tracking Label Verification (kids sizes 4-20)
- Toxicology (if not tested previously in Stage 2)
- pH Value

Kids sizes 0 – 4T

- Appearance Retention for Wash Durability (10 Home Launderings)
- Attachment Strength/Small Parts
- Sharp Points & Sharp Edges
- Toxicology (if not tested previously in Stage 2)
- Label Verification & Tracking Label Verification
- pH Value

4.3 Scenario 3 – Example 2: One base fabric/fabrication (construction/content), one or multiple graphic patterns and multiple techniques



Option for Garment Testing in above scenario:

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1. Testing all T's individually – as would be sold in stores
2. Pick lightest color in the assortment; apply up to a maximum of 6 graphics on 1 garment, without distorting shape, size, or appearance.
For this example: Total of 4 graphics, 4 techniques
 - 1) Glow in the dark bug applied to the front and high density noise maker applied to the back of the light grey tee and tested.
 - 2) Cougar with flocking applied to the front and Truck screen print applied to the back of the light grey tee and tested.

Lab to conduct following tests:

Adults and Kids sizes 4-20

- Appearance Retention for Wash Durability (5 Home Launderings)
- Attachment Strength
- Label Verification
- Tracking Label Verification (kids sizes 4-20)
- Toxicology (if not tested previously in Stage 2)
- pH Value

Kids sizes 0 – 4T

- Appearance Retention for Wash Durability (10 Home Launderings)
- Attachment Strength/Small Parts
- Sharp Points & Sharp Edges
- Toxicology (if not tested previously in Stage 2)
- Label Verification & Tracking Label Verification
- pH Value

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5. Guidelines for Print on Demand Testing

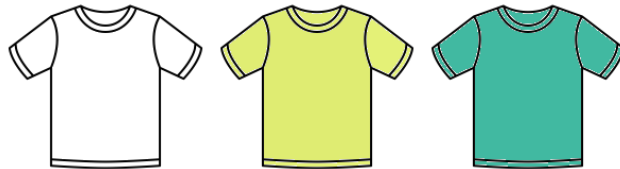
5.1 Stage 1: Blank Garment Testing

| What to Test? | Age Category | Criteria for Testing | Frequency of Testing | Tests to be conducted |
|---|--------------|--|----------------------|----------------------------|
| Blank Garment (Darkest Color) | Adults | Test every construction & fiber content | Every 12 months | Refer to test protocol 216 |
| Blank Garment (Additional Colors) | Adults | Each Additional colorway of every construction & fiber content | Every 12 months | Refer to test protocol 216 |
| Blank Garment (Darkest Color) | Kids (0-20) | Test every construction & fiber content | Every 6 months | Refer to test protocol 216 |
| Blank Garment (Additional Colors) | Kids (0-20) | Each Additional colorway of every construction & fiber content | Every 6 months | Refer to test protocol 216 |



Darkest Colorway
Full Garment Testing

- Fiber Content
- Fabric Weight
- Flammability
- Dimensional Stability
- Kohl's Appearance Retention
- Tensile Strength
- Bursting Strength
- Seam Strength
- Colorfastness to Crocking
- Colorfastness to Chlorine and Non-Chlorine Bleach
- Formaldehyde
- pH Value



Additional Colorways
Additional Colorway Testing

- Flammability
- Formaldehyde
- pH Value
- Colorfastness to Chlorine and Non-Chlorine Bleach
- Colorfastness to Crocking
- Kohl's Appearance Retention

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5.2 Stage 1: Ink Toxicology & Durability Testing

| What to Test? | Age Category | Criteria for Testing | Frequency of Testing | Tests to be conducted |
|-------------------------|--------------|--|----------------------|--|
| Toxicology & Durability | Adults | Test every color Ink, dye stuff, and/or application technique | Every 12 months | Lead in Surface Coating, Lead in Substrate, Phthalates (when applicable), Label Review, Adult Tracking Label, Durability (5 washes), pH value |
| Toxicology & Durability | Kids (0-20) | Test every color Ink, dye stuff, and/or application technique | Every 6 months | Lead in Surface Coating, Lead in Substrate, Phthalates (when applicable), Label Review, CPSIA Tracking Label, Durability (10 washes), pH value |

- Pick lightest color in garment assortment; apply ink swatches on garment, without distorting shape, size or appearance.
- All ink colors must be tested, and can be spread across multiple garment to ensure all ink colors are captured. If ink color added after initial testing, must be tested and added to GCC.

*Three samples per ink swatch set required for testing.

Sample 1: Toxicology testing on inks

Samples 2 & 3: Durability Control Sample & Durability

GCCs

- Submit with Stage two testing request form
- Use Base Style number and all suffixes associated
- Tracking label will have base style number and manufacture date will be month when printed

Revision History

5.1 2/2013 Updates

- A. Updated section 1 – Stage 1 Testing
 - Added Tensile Strength, Tear Strength and Seam Slippage/Seam Strength test for wovens.
 - Added price for woven testing
- B. Updated section 3 – Stage 3 Testing
 - Added pH value test and pricing
- C. Updated Graphic Program Test Protocol to 216-5.

5.2 11/2014 Updates

- A. Removed pricing

5.3 5/2019 Updates

- A. Added Section 5 – Print on Demand Testing Guidelines