

# Boken Standard (Textile Products) Fabrics and Garments Performance Standards - Excerpted Version -

◎ : Mandatory tests ○ : Mandatory tests depending on fabrics and use

In principle, test all colors for colorfastness and formaldehyde testing, and test one color for each style number, design and material for fiber content, physical property, dimensional change and garment testing. (Formaldehyde is excluded.)

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| TEST ITEM                            | TEST METHOD            | REQUIREMENT  |  |                                     |                         |             | REMARKS  |   |              |  |   |  |   |  |
|--------------------------------------|------------------------|--|--|-------------------------------------|-------------------------|-------------|--|---|--------------|--|---|--|---|--|
|                                      |                        | Men's wear   | Women's and Children's wear  | Woven shirts and blouses            | Knit shirts and blouses | Sweaters    |  |   |              |  |   |  |   |  |
| Fiber Content (Fiber Identification) | JIS L 1030             | ◎  | ◎  | ◎                                   | ◎                       | ◎           | Apply to items required by law. Conduct fiber identification when it is suitable. Exclude from judgment of pass or fail. |   |              |  |   |  |   |  |
| COLOR FASTNESS                       | Light                  | min. Grade   | JIS L 0842<br>Exposure Method 3  | ◎                                   | ◎                       | ◎           | ◎  | ◎ | ◎            | ◎  | Value in ( ) applies to pale shades. Yellowing due to fluorescent brightener is excluded from judgment of pass or fail. |  |   |  |
|                                      | Washing                | min. Grade   | JIS L 0844<br>No. A-1 or A-2   | Change in color                     | ◎                       | ◎           | ◎  | ◎ | ◎            | ◎  | ◎   | Apply to washing instructions. Change in color due to fluorescent brightener is excluded from judgment of pass or fail.*   |   |  |
|                                      |                        |  |  | Staining                            | ○                       | ○           | ○  | ○ | ○            | ○  | ○   | Value in ( ) applies to denim. [Reference] Liquid contamination ≥ Grade 3  |   |  |
|                                      |                        |  |  | Bleeding                            | ○                       | ○           | ○  | ○ | ○            | ○  | ○   | Apply to fabrics with assorted colors of deep and pale shades.   |   |  |
|                                      | Perspiration           | min. Grade   | JIS L 0848<br>Acid solution and Alkali solution  | Change in color                     | ◎                       | ◎           | ◎  | ◎ | ◎            | ◎  | ◎   | Value in ( ) applies to fabrics with 50 % or more wool and silk.   |   |  |
|                                      |                        |  |  | Staining                            | ○                       | ○           | ○  | ○ | ○            | ○  | ○   | Apply to fabrics with assorted colors of deep and pale shades.   |   |  |
|                                      |                        |  |  | Bleeding                            | ○                       | ○           | ○  | ○ | ○            | ○  | ○   |  |   |  |
|                                      | Rubbing                | min. Grade   | JIS L 0849   | Type II                             | Dry                     | ◎           | ◎  | ◎ | ◎            | ◎  | ◎   | Value in ( ) applies to fabrics with special prints, raising or deep shades.   |   |  |
|                                      |                        |  |  |                                     | Wet                     | ○           | ○  | ○ | ○            | ○  | ○   | Value in < > applies to denim, velveteen and corduroy.   |   |  |
|                                      |                        |  |  |                                     |                         |             |  |   |              |  |   |  |   |  |
| Dry Cleaning                         | min. Grade             | JIS L 0860<br>Method A-1 (Perchloroethylene)<br>or<br>Method B-1 (Petroleum-base)<br>Daimaru Method (Method I) | Change in color  | ○                                   | ○                       | ○           | ○  | ○ | ○            | ○  | Apply to dry cleaning instructions.   |  |   |  |
|                                      |                        |  | Staining   | ○                                   | ○                       | ○           | ○  | ○ | ○            | ○  | [Reference] Liquid contamination: ≥ Grade 3   |  |   |  |
|                                      |                        |  | Bleeding   | ○                                   | ○                       | ○           | ○  | ○ | ○            | ○  | Apply to fabrics with assorted colors of deep and pale shades.  |  |   |  |
| Bleeding                             | min. Grade             |  | Staining   | ○                                   | ○                       | ○           | ○  | ○ | ○            | Apply to fabrics with assorted colors of deep and pale shades.       |   |  |   |  |
| Perspiration and Light               | min. Grade             | ATTS Method  | Change in color  | ○                                   | ○                       | ○           | ○  | ○ | ○            | Apply to sportswear and caps/hats with 50% or more cellulosic fiber. |   |  |   |  |
| PHYSICAL PROPERTY                    | Tensile Strength       | min. N   | JIS L 1096 Method A (Strip Method)   |                                     |                         |             |  |   |              |  | Apply to woven fabrics. Value in ( ) applies to thin fabrics.   |  |   |  |
|                                      | Tear Strength          | min. N   | JIS L 1096 Method D (Pendulum Method)  |                                     |                         |             |  |   |              |  | Apply to woven fabrics. Value in ( ) applies to thin fabrics.   |  |   |  |
|                                      | Bursting Strength      | min. kPa   | JIS L 1096 Method A (Mullen Type Method)   |                                     |                         |             |  |   |              |  | Apply to knit fabrics. Value in ( ) applies to thin fabrics.  |  |   |  |
|                                      | Slippage Resistance    | max. mm  | JIS L 1096 Method B (Seam Slipping Method)   |                                     |                         |             |  |   |              |  | Apply to woven fabrics. Load applied: Thick fabrics...117.7N, Thin fabrics...49.0N                                      |  |   |  |
|                                      | Pilling                | min. Grade   | JIS L 1076 Method A (ICI Type Method)  |                                     |                         |             |  |   |              |  | Woven fabrics: 10 hours, Knit fabrics: 5 hours Value in ( ) applies to raised and woolen fabrics.                       |  |   |  |
|                                      | Snag                   | min. Grade   | JIS L 1058 Method D-1 (Damage Bar Method)  |                                     |                         |             |  |   |              |  | Apply to continuous filament yarn and textured yarn.  |  |   |  |
|                                      | Pile Retention         | min. %   | JIS L 1075 Method A (Universal Type Method)  |                                     |                         |             |  |   |              |  | Apply to velveteen and corduroy.  |  |   |  |
|                                      | Water Repellency       | min. Grade   | JIS L 1092 Spray Method  | Original/After wash or dry cleaning |                         |             |  |   |              |  |   | Apply to water repellency disclosures.   |   |  |
|                                      |                        | max. cm <sup>3</sup> /cm <sup>2</sup> · S  | JIS L 1096 Method A (Frazier Type Method)  |                                     |                         |             |  |   |              |  |   | Apply to feathers.   |   |  |
|                                      | Padding Penetration    |  | Boken Method BQE A 012   |                                     |                         |             |  |   |              |  | Apply to padding such as wool and synthetic fiber.  |  |   |  |
| Surface Flash                        |                        | JIS L 1917   | Flame spread   | No (n < 10 cm)                      | ○                       | ○           | ○  | ○ | ○            | ○  | Apply to pile and raised surface with cellulosic fiber of 50% or more.  |  |   |  |
|                                      |                        |  |  | Yes (10cm ≤ n < 20cm)               | ○                       | ○           | ○  | ○ | ○            | ○  | Pass<br>Caution needed (Fail) ... Need warnings.  |  |   |  |
| Fluff Adherence                      | min. Grade             | Boken Method BQE B 014   |  |                                     |                         |             |  |   |              |  | Apply to padding such as feathers, wool and synthetic fiber.  |  |   |  |
| DIMENSIONAL CHANGE                   | Home Laundering Method | %  | JIS L 0217<br>Washing: According to care instructions.*<br>Drying: Preference to line dry. For sweaters, according to care instructions. | Line dry                            | Woven fabric            | ○           | ○  | ○ | ○            | ○  | ○   | Apply to fabrics with raising, pile and animal fiber blended.  |   |  |
|                                      |                        |  |  |                                     | Knit fabric             | Wale        | ○  | ○ | ○            | ○  | ○   | ○  | Apply to washing instructions.                          |  |
|                                      |                        |  |  |                                     |                         | Course      | ○  | ○ | ○            | ○  | ○   | ○  | *Use Method 103 when no care instructions are proposed. |  |
|                                      |                        |  |  |                                     | Flat dry                | Knit fabric | ○  | ○ | ○            | ○  | ○   | ○  | ○   | ※Fabrics with recuperative strength in a transverse direction (rib stitch, crepe, etc.) are excluded from judgment of pass or fail. However, if the appearance change is noticeable, it shall be judged as fail. |
|                                      |                        |  |  |                                     |                         | Wale        | ○  | ○ | ○            | ○  | ○   | ○  | ○   |  |
|                                      |                        |  |  |                                     | Dry Cleaning Method     | %           | JIS L 1096 Method J-1 or J-2   |   | Woven fabric | ○  | ○   | ○  | ○   | ○  |
| Knit fabric                          | ○                      | ○  | ○  | ○                                   |                         |             |  |   | ○            | ○  | ○   | ※Fabrics with recuperative strength in a transverse direction (rib stitch, crepe, etc.) are excluded from judgment of pass or fail. However, if the appearance change is noticeable, it shall be judged as fail. |   |  |

• White and gray fabrics may exclude the color fastness test unless the fabric has a possibility of color and/or feeling change.

• \*When change in color due to fluorescent brightener is grade 3 - 4 or below, warnings such as "Use detergent without fluorescent brightener" shall be included in the care instructions.

• "[Reference]" shall exclude from judgment of pass or fail.

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| GARMENT TESTING            | TEST ITEM                        |                                    | TEST METHOD  | REQUIREMENT               |                             |                           |                           |                           |   | Remarks   |
|----------------------------|----------------------------------|------------------------------------|--|---------------------------|-----------------------------|---------------------------|---------------------------|---------------------------|---|---|
|                            |                                  |                                    |  | Men's wear                | Women's and Children's wear | Woven shirts and blouses  | Knit shirts and blouses   | Sweaters                  |   |   |
|                            | LABELING                         |                                    |  | ◎ Must be appropriate.    | ◎ Must be appropriate.      | ◎ Must be appropriate.    | ◎ Must be appropriate.    | ◎ Must be appropriate.    | ◎ Must be appropriate.  |   |
|                            | Fiber Content                    |                                    | Household Goods Quality Labeling Act   | ◎ Must be appropriate.    | ◎ Must be appropriate.      | ◎ Must be appropriate.    | ◎ Must be appropriate.    | ◎ Must be appropriate.    | ◎ Must be appropriate.  |   |
|                            | Care Instructions                |                                    | Household Goods Quality Labeling Act   | ◎ Must be appropriate.    | ◎ Must be appropriate.      | ◎ Must be appropriate.    | ◎ Must be appropriate.    | ◎ Must be appropriate.    | ◎ Must be appropriate.  |   |
|                            | Size                             |                                    | JIS, etc.  | ◎ Must be appropriate.    | ◎ Must be appropriate.      | ◎ Must be appropriate.    | ◎ Must be appropriate.    | ◎ Must be appropriate.    | ◎ Must be appropriate.  | Exclude from judgment of pass or fail.  |
|                            | Country of Origin                |                                    | Act against Unjustifiable Premiums and Misleading Representations  | ◎ Must be appropriate.    | ◎ Must be appropriate.      | ◎ Must be appropriate.    | ◎ Must be appropriate.    | ◎ Must be appropriate.    | ◎ Must be appropriate.  |   |
|                            | APPEARANCE                       | Appearance and Sewing              | Boken Sewing Performance Standard  | ◎ Must meet requirements. | ◎ Must meet requirements.   | ◎ Must meet requirements. | ◎ Must meet requirements. | ◎ Must meet requirements. | ◎ Must meet requirements.   |   |
|                            | WASHING RESISTANCE               | Appearance and Sewing              | JIS L 0217<br>Washing: According to care instructions.<br>Drying: Preference to line dry.<br><br>For sweaters, according to care instructions. | ○ No defects.             | ○ No defects.               | ○ No defects.             | ○ No defects.             | ○ No defects.             | ○ No defects.   | Apply to washing instructions.<br><br>Value in ( ) applies to slit, front opening, pattern in a longitudinal direction, etc.<br>※Fabrics with recuperative strength in a transverse direction (rib stitch, crepe, etc.) are excluded from judgment of pass or fail. However, if it has an effect on appearance and/or wear, report it as fail.<br>*Dimensional change for neck band length of dress shirt shall be within ± 1.5%. |
| Change in Color            |                                  | min. Grade                         |  | ○ 4                       | ○ 4                         | ○ 4                       | ○ 4                       | ○ 4                       | ○ 4   |   |
| Bleeding                   |                                  | min. Grade                         |  | ○ 4 - 5                   | ○ 4 - 5                     | ○ 4 - 5                   | ○ 4 - 5                   | ○ 4 - 5                   | ○ 4 - 5   |   |
| Puckering                  |                                  | min. Grade                         |  | ○ 3                       | ○ 3                         | ○ 3                       | ○ 3                       | ○ 3                       | ○ 3   |   |
| Bias Filling after Washing |                                  | max. %                             |  | ○ 7 (5)                   | ○ 7 (5)                     | ○ 7 (5)                   | ○ 7 (5)                   | ○ 7 (5)                   | ○ 7 (5)   |   |
| Dimensional Change         |                                  | %                                  |  | Line dry                  | Woven fabric                | ○ - 3 to + 1※             | ○ - 3 to + 1※             | ○ - 4 to + 1※*            |   |   |
|                            | Knit fabric                      |                                    | ○ - 4 to + 2   |                           | ○ - 4 to + 2                |                           | ○ - 6 to + 2              | ○ - 6 to + 2              |   |   |
|                            | Flat dry                         |                                    | Wale Course  | ○ - 5 to + 2※             | ○ - 5 to + 2※               |                           | ○ - 7 to + 2※             | ○ - 7 to + 2※             |   |   |
|                            |                                  |                                    | Knit fabric  |                           |                             |                           | ○ - 7 to + 2              | ○ - 8 to + 2※             |   |   |
|                            | REPEATED WASHING RESISTANCE      | Appearance Change                  |  | ○ No defects.             | ○ No defects.               | ○ No defects.             | ○ No defects.             | ○ No defects.             | Apply to fabrics with coating, flock finish, bonding finish and special prints (pigment, rubber printing, transfer printing, foam printing, lame), etc. |   |
| Change in Color            | min. Grade                       | JIS L 0217<br>Method 103, Line dry | After 1st washing  | ○ 4                       | ○ 4                         | ○ 4                       | ○ 4                       | ○ 4                       |   |   |
| Bleeding                   | min. Grade                       |                                    | After 5th washing  | ○ 3                       | ○ 3                         | ○ 3                       | ○ 3                       | ○ 3                       |   |   |
|                            | DRY CLEANING RESISTANCE          | Appearance and Sewing              | Professional Dry Cleaning Method<br>Perchloroethylene or Petroleum-base  | ○ No defects.             | ○ No defects.               | ○ No defects.             | ○ No defects.             | ○ No defects.             | ○ No defects.   | Apply to dry cleaning instructions. (Washing instructions may exclude this testing.)<br><br>Value in ( ) applies to slit, front opening, pattern in a longitudinal direction, etc.<br>※Fabrics with recuperative strength in a transverse direction (rib stitch, crepe, etc.) are excluded from judgment of pass or fail. However, if it has an effect on appearance and/or wear, report it as fail.                              |
| Change in Color            |                                  | min. Grade                         |  | ○ 4                       | ○ 4                         | ○ 4                       | ○ 4                       | ○ 4                       | ○ 4   |   |
| Bleeding                   |                                  | min. Grade                         |  | ○ 4 - 5                   | ○ 4 - 5                     | ○ 4 - 5                   | ○ 4 - 5                   | ○ 4 - 5                   | ○ 4 - 5   |   |
| Puckering                  |                                  | min. Grade                         |  | ○ 3                       | ○ 3                         | ○ 3                       | ○ 3                       | ○ 3                       | ○ 3   |   |
| Bias Filling after Washing |                                  | max. %                             |  | ○ 5 (3)                   | ○ 5 (3)                     | ○ 5 (3)                   | ○ 5 (3)                   | ○ 5 (3)                   | ○ 5 (3)   |   |
| Dimensional Change         |                                  | %                                  |  | Woven fabric              | ○ ± 2※                      | ○ ± 2※                    | ○ ± 2※                    |                           |   |   |
|                            | Knit fabric                      |                                    | ○ ± 2※   | ○ ± 2※                    |                             | ○ ± 2※                    | ○ ± 2※                    |                           |   |   |
|                            | REPEATED DRY CLEANING RESISTANCE | Appearance Change                  |  | ○ No defects.             | ○ No defects.               | ○ No defects.             | ○ No defects.             | ○ No defects.             | Apply to fabrics with coating, flock finish, bonding finish and special prints (pigment, rubber printing, transfer printing, foam printing, lame), etc. |   |
| Change in Color            |                                  | min. Grade                         | Professional Dry Cleaning Method<br>Perchloroethylene or Petroleum-base  | After 1st dry cleaning    | ○ 4                         | ○ 4                       | ○ 4                       | ○ 4                       |   | ○ 4   |
| Bleeding                   |                                  | min. Grade                         |  | After 3rd dry cleaning    | ○ 3                         | ○ 3                       | ○ 3                       | ○ 3                       |   | ○ 3   |
|                            |                                  |                                    |  | ○ 4 - 5                   | ○ 4 - 5                     | ○ 4 - 5                   | ○ 4 - 5                   | ○ 4 - 5                   |   |   |

| CATEGORY                        | ITEM  |
|---------------------------------|---|
| Men's wear                      | Coats, Suits, Jackets, Pants, etc.  |
| Women's and Children's wear     | Coats, Suits, Jackets, Dresses, Skirts, Pants, etc.   |
| Woven shirts and blouses        | Casual shirts, Dress shirts, Blouses, Sports shirts, etc.   |
| Knit shirts and blouses         | Casual shirts, Blouses, Sports shirts, Polo shirts, T-shirts, Training shirts, etc.   |
| Sweaters                        | Knit sweaters, Cardigans, Vests, etc.   |
| Night wear and Undergarments    | Pajamas, Negligees, Undergarments, Lingerie, Foundation garments, etc.  |
| Swimming wear                   | All swimming wear, Swimming caps, etc.  |
| Babies' wear and Small products | Babies' wear (Outer garments, Intermediate garments, Undergarments, etc.), Small products (Towels, Bibs, Mittens, Hosiery, etc.) Note: Swimming wear for babies apply to "Swimming Wear". |
| Towels and Small products       | Towels, Bath towels, Handkerchiefs, Scarves, Neckties, Hosiery, Gloves, Caps/Hats, etc.   |
| Bedding and Furnishings         | Bedding (Bed sheets and spreads, Blankets, Summer quilts, Futons, Bedding for babies, etc.), Furnishings (Curtains, Carpets, Rugs, Bath mats, etc.)                                       |
| Natural leather                 | Natural leather for clothing (cow, horse, deer, pig, sheep, etc.)   |
| Synthetic leather               | Artificial leather, synthetic leather, etc. for clothing  |
| Ornamentation and Trimmings     | Ornamentation and Trimmings (Embroidery, Applique, Wappen, Spindle, Lace, Tape, Piping, Button, Zipper, etc.)   |
| Lining                          | Linings   |

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| TEST ITEM                            | TEST METHOD                       |  | REQUIREMENT   |                                     |                                |  |                         |  | Remarks    |  |            |  |  |   |  |  |
|--------------------------------------|-----------------------------------|--|---|-------------------------------------|--------------------------------|--|-------------------------|--|------------|--|------------|--|--|---|--|--|
|                                      |                                   |  | Night wear and Undergarments  | Swimming wear                       | Babies wear and Small products | Towels and Small products  | Bedding and Furnishings |  |            |  |            |  |  |   |  |  |
| Fiber Content (Fiber Identification) | JIS L 1030                        |  | ◎   | ----                                | ◎                              | ----   | ◎                       | ----   | ◎          | ----   | ◎          | ----   | Apply to items required by law. Conduct fiber identification when it is suitable. Exclude from judgment of pass or fail.   |   |  |  |
| COLOR FASTNESS                       | Light                             | min. Grade   | JIS L 0842<br>Exposure Method 3   | ◎                                   | 3*                             | ◎  | 3                       | ◎  | 3*         | ◎  | 3*         | ◎  | 3 [Curtain 4]  | *Undergarments, lingerie, foundation garments and hosiery are excluded from testing. Yellowing due to fluorescent brightener is excluded from judgment of pass or fail. |  |  |
|                                      | Washing                           | min. Grade   | JIS L 0844<br>No. A-1 or A-2  | Change in color                     | ◎                              | 4  | ◎                       | 4  | ◎          | 4  | ◎          | 4  | ◎  | 4   | Apply to washing instructions. Change in color due to fluorescent brightener is excluded from judgment of pass or fail.*   |  |
|                                      |                                   |  |   | Staining                            | ◎                              | 3  | ◎                       | 3  | ○          | 3  | ○          | 3  | ○  | 3   | [Reference] Liquid contamination: ≥ Grade 3  |  |
|                                      |                                   |  |   | Bleeding                            | ◎                              | 4  | ◎                       | 4  | ◎          | 4  | ◎          | 4  | ◎  | 4   | Apply to fabrics with assorted colors of deep and pale shades.   |  |
|                                      | Perspiration                      | min. Grade   | JIS L 0848<br>Acid solution and Alkali solution                                   | Change in color                     | ◎                              | 4  | ◎                       | 4  | ◎          | 4  | ◎          | 4  | ◎  | 4   | *Apply to bedding.   |  |
|                                      |                                   |  |   | Staining                            | ◎                              | 3 (2-3)  | ◎                       | 3  | ◎          | 3 (2-3)  | ◎          | 3 (2-3)  | ○*   | 3 (2-3)   | Value in ( ) applies to fabrics with 50 % or more wool and silk.   |  |
|                                      |                                   |  |   | Bleeding                            | ◎                              | 4  | ◎                       | 4  | ◎          | 4  | ◎          | 4  | ◎  | 4   | Apply to fabrics with assorted colors of deep and pale shades.   |  |
|                                      | Rubbing                           | min. Grade   | JIS L 0849  | Type II                             | Dry                            | ◎  | 4 (3-4)                 | ◎  | 4 (3-4)    | ◎  | 4 (3-4)    | ◎  | 4 (3-4)  | ◎   | 4 (3-4)  | Value in ( ) applies to fabrics with special prints, raising or deep shades.         |
|                                      |                                   |  |   |                                     | Wet                            | ◎  | 2-3 (2)                 | ◎  | 2-3 (2)    | ◎  | 2-3 (2)    | ◎  | 2-3 (2)  | ◎   | 2-3 (2)  | Value in < > applies to denim, velveteen and corduroy.                               |
|                                      | Dry Cleaning                      | min. Grade   | JIS L 0860<br>Method A-1 (Perchloroethylene)<br>or<br>Method B-1 (Petroleum-base) | Change in color                     | ○                              | 4  | ○                       | 4  | ○          | 4  | ○          | 4  | ○  | 4   | Apply to dry cleaning instructions.  |  |
| Staining                             |                                   |  |   | ○                                   | 3-4                            | ○  | 3-4                     | ○  | 3-4        | ○  | 3-4        | ○  | 3-4  | [Reference] Liquid contamination: ≥ Grade 3   |  |  |
| Bleeding                             |                                   |  |   | ○                                   | 4                              | ○  | 4                       | ○  | 4          | ○  | 4          | ○  | 4  | Apply to fabrics with assorted colors of deep and pale shades.  |  |  |
| Chlorinated Water                    | min. Grade                        | JIS L 0884 Method B  | Change in color   | ◎                                   | 4-5                            | ◎  | 4 (3-4)                 | ◎  | 4-5        | ◎  | 4-5        | ◎  | 4-5  | Value in ( ) applies to fabrics with 50% or more cellulosic fiber.  |  |  |
| Bleeding                             | min. Grade                        | Daimaru Method (Method I)  | Staining  | ○                                   | 4-5                            | ○  | 4-5                     | ○  | 4-5        | ○  | 4-5        | ○  | 4-5  | Apply to fabrics with assorted colors of deep and pale shades.  |  |  |
| Perspiration and Light               | min. Grade                        | ATTS Method  | Change in color   | ○                                   | 3                              | ○  | 3                       | ○  | 3          | ○  | 3          | ○  | 3  | Apply to sportswear and caps/hats with 50% or more cellulosic fiber.  |  |  |
| PHYSICAL PROPERTY                    | Tensile Strength                  | min. N   | JIS L 1096 Method A (Strip Method)  | ◎                                   | 200 (150)                      | ◎  | 200                     | ◎  | 150        | ○  | <<120>>    | ◎  | 150 <<120>>  | Apply to woven fabrics. Value in ( ) applies to thin fabrics. Value in < > applies to blankets and towel clothes.   |  |  |
|                                      | Tear Strength                     | min. N   | JIS L 1096 Method D (Pendulum Method)   | ○                                   | 10 (7)                         | ○  | 10 (6)                  | ○  | 7*         | ○  | 10 (6)*    | ○  | 10 (7)*  | Apply to woven fabrics. Value in ( ) applies to thin fabrics. *Towel clothes are excluded from testing.   |  |  |
|                                      | Bursting Strength                 | min. kPa   | JIS L 1096 Method A (Mullen Type Method)  | ○                                   | 500 (300)                      | ○  | 500 (350)               | ○  | 300        | ○  | 500 (350)  | ○  | 500 (400)  | Apply to knit fabrics. Value in ( ) applies to thin fabrics.  |  |  |
|                                      | Slippage Resistance               | max. mm  | JIS L 1096 Method B (Seam Slipping Method)  | ○                                   | 3                              | ○  | 3                       | ○  | 3          | ○  | 3          | ○  | 3  | Apply to woven fabrics. Load applied: Thick fabrics...117.7N, Thin fabrics...49.0N  |  |  |
|                                      | Pilling                           | min. Grade   | JIS L 1076 Method A (ICI Type Method)   | ◎                                   | 3 (2.5)                        | ◎  | 3                       | ◎  | 3          | ◎  | 3 (2.5)    | ◎  | 3 (2.5)  | Woven fabrics: 10 hours, Knit fabrics: 5 hours Value in ( ) applies to raised and woolen fabrics.   |  |  |
|                                      | Snag                              | min. Grade   | JIS L 1058 Method D-1 (Damage Bar Method)   | ◎                                   | 3                              | ○  | 3                       | ◎  | 3          | ○  | 3          | ◎  | 3  | Apply to continuous filament yarn and textured yarn.  |  |  |
|                                      | Pile Retention                    | min. %   | JIS L 1075 Method A (Universal Type Method)                                       | ◎                                   | 50                             | ○  | 50                      | ◎  | 50         | ○  | 50         | ◎  | 60   | Apply to velveteen and corduroy.  |  |  |
|                                      |                                   | min. N   | JIS L 1075 Method B (Tensile Testing Machine Method)                              | ◎                                   | 1                              | ○  | 1                       | ◎  | 1          | ○  | 1          | ◎  | 1  | Apply to towel cloth (loop pile).   |  |  |
|                                      | Water Repellency                  | min. Grade   | JIS L 1092 Spray Method   | Original/After wash or dry cleaning | ◎                              | 2/2  | ◎                       | 2/2  | ◎          | 2/2  | ◎          | 2/2  | ◎  | 2/2   | Apply to water repellency disclosures.   |  |
|                                      | Air Permeability                  | max. cm <sup>3</sup> /cm <sup>2</sup> · S  | JIS L 1096 Method A (Frazier Type Method)   | ◎                                   | 3                              | ◎  | 3                       | ◎  | 3          | ◎  | 3          | ◎  | 3  | Apply to feathers.  |  |  |
|                                      | Padding Penetration               | max. %   | Boken Method BQE A 012  | ◎                                   | 5                              | ◎  | 5                       | ◎  | 5          | ◎  | 5          | ◎  | 5  | Apply to padding such as wool and synthetic fiber.  |  |  |
|                                      | Fluff Loss                        | max. %   | Boken Method BQE A 013<br>Method 103  | ◎                                   | Yes (Not)                      | ◎  | Yes (Not)               | ◎  | Yes (Not)  | ◎  | Yes (Not)  | ◎  | Yes (Not)  | Apply to padding such as wool and synthetic fiber.  |  |  |
|                                      | Surface Flash                     | max. %   | JIS L 1917  | Flame spread                        | ○                              | No (n < 10 cm)<br>Yes (10cm ≤ n < 20cm)<br>Yes (Take 1 second or more to 20cm) | ○                       | No (n < 10 cm)<br>Yes (10cm ≤ n < 20cm)<br>Yes (Take 1 second or more to 20cm) | ○          | No (n < 10 cm)<br>Yes (10cm ≤ n < 20cm)<br>Yes (Take 1 second or more to 20cm) | ○          | No (n < 10 cm)<br>Yes (10cm ≤ n < 20cm)<br>Yes (Take 1 second or more to 20cm) | ○  | No (n < 10 cm)<br>Yes (10cm ≤ n < 20cm)<br>Yes (Take 1 second or more to 20cm)  | Apply to pile and raised surface with cellulosic fiber of 50% or more.   |  |
|                                      | Fluff Adherence                   | min. Grade   | Boken Method BQE B 014  | ◎                                   | 3                              | ◎  | 3                       | ◎  | 3          | ◎  | 3          | ◎  | 3  | Apply to fabrics with raising, pile and animal fiber blended.   |  |  |
|                                      | Abrasion Resistance               | min. Cycle   | JIS L 1096 Method F-1 (Uniform Type Method)                                       | ◎                                   | 500                            | ◎  | 500                     | ◎  | 500        | ◎  | 500        | ◎  | 500  | Apply to hosiery.   |  |  |
| Water Absorbency                     | max. Second                       | JIS L 1907 Sedimentation Method  | ◎   | 60                                  | ◎                              | 60   | ◎                       | 60   | ◎          | 60   | ◎          | 60   | Apply to bath mats and towels with pile or loop pile.  |   |  |  |
|                                      | max. Second                       | JIS L 1907 Instillation Method   | ◎   | 10                                  | ◎                              | 10   | ◎                       | 10   | ◎          | 10   | ◎          | 10   | [Reference] For materials over 60 seconds, report data of Method 103. (1 wash, Line dry)   |   |  |  |
| DIMENSIONAL CHANGE                   | Home Laundering Method            | %<br>Washing: According to care instructions.*<br>Drying: Preference to line dry.<br>For sweaters, according to care instructions. | Line dry  | Woven fabric                        | ◎                              | - 5 to + 2※  | ◎                       | - 5 to + 2※  | ○          | - 4 to + 2※  | ○          | - 5 to + 2※  | ○  | - 5 to + 2  | Apply to washing instructions.   |  |
|                                      |                                   |  |   | Knit fabric                         | ◎                              | - 6 to + 2   | ◎                       | - 6 to + 2   | ○          | - 6 to + 2   | ○          | - 6 to + 2   | ○  | - 6 to + 2  | *Use Method 103 when no care instructions are proposed.  |  |
|                                      |                                   |  |   | Wale Course                         | ◎                              | - 8 to + 2※  | ◎                       | - 8 to + 2※  | ○          | - 8 to + 2※  | ○          | - 8 to + 2※  | ○  | - 8 to + 2  | ※Fabrics with recuperative strength in a transverse direction (rib stitch, crepe, etc.) are excluded from judgment of pass or fail. However, if the appearance change is noticeable, it shall be judged as fail. |  |
|                                      |                                   |  |   | Flat dry                            | Knit fabric                    | ○  | - 7 to + 2              | ○  | - 7 to + 2 | ○  | - 7 to + 2 | ○  | - 7 to + 2   | ○   | - 7 to + 2   | Apply to dry cleaning instructions. (Washing instructions may exclude this testing.) |
| Dry Cleaning Method                  | %<br>JIS L 1096 Method J-1 or J-2 | Woven fabric   | ○   | ± 2※                                | ○                              | ± 2※   | ○                       | ± 2※   | ○          | ± 2※   | ○          | ± 2  | ※Fabrics with recuperative strength in a transverse direction (rib stitch, crepe, etc.) are excluded from judgment of pass or fail. However, if the appearance change is noticeable, it shall be judged as fail. |   |  |  |
|                                      |                                   | Knit fabric  | ○   | ± 2※                                | ○                              | ± 2※   | ○                       | ± 2※   | ○          | ± 2※   | ○          | ± 2  | Apply to dry cleaning instructions. (Washing instructions may exclude this testing.)   |   |  |  |

• White and gray fabrics may exclude the color fastness test unless the fabric has a possibility of color and/or feeling change.  
 • \*When change in color due to fluorescent brightener is grade 3 - 4 or below, warnings such as "Use detergent without fluorescent brightener" shall be included in the care instructions.  
 • "[Reference]" shall exclude from judgment of pass or fail.

# Boken Standard (Textile Products) Fabrics and Garments Performance Standards - Excerpted Version -

◎:Mandatory tests ○:Mandatory tests depending on fabrics and use

In principle, test all colors for colorfastness and formaldehyde testing, and test one color for each style number, design and material for fiber content, physical property, dimensional change and garment testing. (Formaldehyde is excluded.)

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| G A R M E N T T E S T I N G      | TEST ITEM                  |                            | TEST METHOD  |  | REQUIREMENT                                   |             |                         |             |                                |             | Remarks                 |                           |                         |                         |   |   |            |            |
|----------------------------------|----------------------------|----------------------------|--|--|---|-------------|-------------------------|-------------|--------------------------------|-------------|-------------------------|---------------------------|-------------------------|-------------------------|---|---|------------|------------|
|                                  |                            |                            |  |  | Night wear and Undergarments                  |             | Swimming wear           |             | Babies wear and Small products |             |                         | Towels and Small products |                         | Bedding and Furnishings |   |   |            |            |
|                                  |                            |                            |  |  |   |             |                         |             |                                |             |                         |                           |                         |                         |   |   |            |            |
| G A R M E N T T E S T I N G      | FORMALDEHYDE               | max. A-Ao                  | Ministry of Health and Welfare Ordinance No. 34                      | Babies   |   |             | ○                       | 0.05        | ◎                              | 0.05        |                         |                           | ○                       | 0.05                    | Apply to law regulated items. Test all colors. Test all parts separately.   |   |            |            |
|                                  |                            | max. µg/g                  |  | Others   |   | ◎           | 75                      |             |                                |             | ○                       | 75                        |                         | ○                       |   | 16  |            |            |
|                                  |                            | max. µg/g                  |  |  |   |             |                         |             |                                |             |                         |                           |                         |                         |   |   |            |            |
|                                  | LABELING                   | Fiber Content              |  | Household Goods Quality Labeling Act                                 |   | ◎           | Must be appropriate.    | ◎           | Must be appropriate.           | ◎           | Must be appropriate.*   | ◎                         | Must be appropriate.*   | ◎                       | Must be appropriate.*   | *For caps/hats, comply with the Tokyo Metropolitan Ordinance.   |            |            |
|                                  |                            | Care Instructions          |  | Household Goods Quality Labeling Act                                 |   | ◎           | Must be appropriate.    | ◎           | Must be appropriate.           | ◎           | Must be appropriate.*   | ◎                         | Must be appropriate.*   | ◎                       | Must be appropriate.*   | *For caps/hats, comply with the Tokyo Metropolitan Ordinance.   |            |            |
|                                  |                            | Size                       |  | JIS, etc.  |   | ◎           | Must be appropriate.    | ◎           | Must be appropriate.           | ◎           | Must be appropriate.    | ◎                         | Must be appropriate.    | ◎                       | Must be appropriate.  | Exclude from judgment of pass or fail.  |            |            |
|                                  |                            | Country of Origin          |  | Act against Unjustifiable Premiums and Misleading Representations    |   | ◎           | Must be appropriate.    | ◎           | Must be appropriate.           | ◎           | Must be appropriate.    | ◎                         | Must be appropriate.    | ◎                       | Must be appropriate.  |   |            |            |
|                                  | APPEARANCE                 | Appearance and Sewing      |  | Boken Sewing Performance Standard                                    |   | ◎           | Must meet requirements. | ◎           | Must meet requirements.        | ◎           | Must meet requirements. | ◎                         | Must meet requirements. | ◎                       | Must meet requirements.   |   |            |            |
|                                  |                            | Appearance and Sewing      |  |  |   | ◎           | No defects.             | ◎           | No defects.                    | ○           | No defects.             | ○                         | No defects.             | ○                       | No defects.   | Apply to washing instructions.  |            |            |
|                                  | WASHING RESISTANCE         | Change in Color            | min. Grade   | JIS L 0217   |   | ◎           | 4                       | ◎           | 4                              | ○           | 4                       | ○                         | 4                       | ○                       | 4   | Value in ( ) applies to slit, front opening, pattern in a longitudinal direction, etc. ※Fabrics with recuperative strength in a transverse direction (rib stitch, crepe, etc.) are excluded from judgment of pass or fail. However, if it has an effect on appearance and/or wear, report it as fail. |            |            |
|                                  |                            | Bleeding                   | min. Grade   | Washing: According to care instructions.                             |   | ◎           | 4 - 5                   | ◎           | 4 - 5                          | ○           | 4 - 5                   | ○                         | 4 - 5                   | ○                       | 4 - 5   |   |            |            |
|                                  |                            | Puckering                  | min. Grade   | Drying: Preference to line dry.                                      |   | ◎           | 3                       | ◎           | 3                              | ○           | 3                       | ○                         | 3                       | ○                       | 3   |   |            |            |
|                                  |                            | Bias Filling after Washing | max. %   |  |   | ◎           | 7 (5)                   | ◎           | 7 (5)                          | ○           | 7 (5)                   | ○                         | 7 (5)                   | ○                       | 7 (5)   |   |            |            |
|                                  |                            | Dimensional Change         | %  |  | For sweaters, according to care instructions. | Line dry    | Woven fabric            | ◎           | - 5 to + 2※                    | ◎           | - 5 to + 2※             | ○                         | - 4 to + 2※             | ○                       | - 5 to + 2※   |   | ○          | - 5 to + 2 |
|                                  |                            |                            |  |  |   |             | Knit fabric             | Wale Course | ◎                              | - 6 to + 2  | ◎                       | - 6 to + 2                | ○                       | - 6 to + 2              | ○   |   | - 6 to + 2 | ○          |
| Wale Course                      |                            |                            |  |  |   |             |                         | ◎           | - 8 to + 2※                    | ◎           | - 8 to + 2※             | ○                         | - 8 to + 2※             | ○                       | - 8 to + 2※   |   | ○          | - 8 to + 2 |
| Flat dry                         | Knit fabric                | Wale Course                |  |  |   |             |                         |             | ○                              | - 7 to + 2  |                         |                           |                         |                         |   |   |            |            |
|                                  |                            |                            |  |  |   |             |                         |             | ○                              | - 8 to + 2※ |                         |                           |                         |                         |   |   |            |            |
| Appearance Change                |                            |                            |  |  | ○   | No defects. | ○                       | No defects. | ○                              | No defects. | ○                       | No defects.               | ○                       | No defects.             | Apply to fabrics with coating, flock finish, bonding finish and special prints (pigment, rubber printing, transfer printing, foam printing, lame), etc. |   |            |            |
| REPEATED WASHING RESISTANCE      | Change in Color            | min. Grade                 | JIS L 0217   |  | ○   | 4           | ○                       | 4           | ○                              | 4           | ○                       | 4                         | ○                       | 4                       | Apply to fabrics with coating, flock finish, bonding finish and special prints (pigment, rubber printing, transfer printing, foam printing, lame), etc. |   |            |            |
|                                  | Bleeding                   | min. Grade                 | Method 103, Line dry   |  | ○   | 3           | ○                       | 3           | ○                              | 3           | ○                       | 3                         | ○                       | 3                       |   |   |            |            |
| DRY CLEANING RESISTANCE          | Appearance and Sewing      |                            |  |  | ○   | No defects. |                         |             | ○                              | No defects. | ○                       | No defects.               | ○                       | No defects.             | Apply to dry cleaning instructions. (Washing instructions may exclude this testing.)  |   |            |            |
|                                  | Change in Color            | min. Grade                 |  |  | ○   | 4           |                         |             | ○                              | 4           | ○                       | 4                         | ○                       | 4                       |   |   |            |            |
|                                  | Bleeding                   | min. Grade                 |  |  | ○   | 4 - 5       |                         |             | ○                              | 4 - 5       | ○                       | 4 - 5                     | ○                       | 4 - 5                   |   |   |            |            |
|                                  | Puckering                  | min. Grade                 |  |  | ○   | 3           |                         |             | ○                              | 3           | ○                       | 3                         | ○                       | 3                       |   |   |            |            |
|                                  | Bias Filling after Washing | max. %                     |  |  | ○   | 5 (3)       |                         |             | ○                              | 5 (3)       | ○                       | 5 (3)                     | ○                       | 5 (3)                   |   |   |            |            |
|                                  | Dimensional Change         | %                          |  | Professional Dry Cleaning Method Perchloroethylene or Petroleum-base | Woven fabric                                  | ○           | ± 2※                    |             |                                | ○           | ± 2※                    | ○                         | ± 2※                    | ○                       |   | ± 2   |            |            |
|                                  |                            |                            |  |  | Knit fabric                                   | ○           | ± 2※                    |             |                                | ○           | ± 2※                    | ○                         | ± 2※                    | ○                       |   | ± 2   |            |            |
| REPEATED DRY CLEANING RESISTANCE | Appearance Change          |                            |  |  | ○   | No defects. |                         |             | ○                              | No defects. | ○                       | No defects.               | ○                       | No defects.             | Apply to fabrics with coating, flock finish, bonding finish and special prints (pigment, rubber printing, transfer printing, foam printing, lame), etc. |   |            |            |
|                                  | Change in Color            | min. Grade                 | Professional Dry Cleaning Method Perchloroethylene or Petroleum-base | After 1st dry cleaning   | ○   | 4           |                         |             | ○                              | 4           | ○                       | 4                         | ○                       | 4                       |   |   |            |            |
|                                  |                            |                            |  | After 3rd dry cleaning   | ○   | 3           |                         |             | ○                              | 3           | ○                       | 3                         | ○                       | 3                       |   |   |            |            |
| Bleeding                         | min. Grade                 |                            |  | ○  | 4 - 5   |             |                         | ○           | 4 - 5                          | ○           | 4 - 5                   | ○                         | 4 - 5                   |                         |   |   |            |            |

| CATEGORY                        | ITEM  |
|---------------------------------|---|
| Men's wear                      | Coats, Suits, Jackets, Pants, etc.  |
| Women's and Children's wear     | Coats, Suits, Jackets, Dresses, Skirts, Pants, etc.   |
| Woven shirts and blouses        | Casual shirts, Dress shirts, Blouses, Sports shirts, etc.   |
| Knit shirts and blouses         | Casual shirts, Blouses, Sports shirts, Polo shirts, T-shirts, Training shirts, etc.   |
| Sweaters                        | Knit sweaters, Cardigans, Vests, etc.   |
| Night wear and Undergarments    | Pajamas, Negligees, Undergarments, Lingerie, Foundation garments, etc.  |
| Swimming wear                   | All swimming wear, Swimming caps, etc.  |
| Babies' wear and Small products | Babies' wear (Outer garments, Intermediate garments, Undergarments, etc.), Small products (Towels, Bibs, Mittens, Hosiery, etc.) Note: Swimming wear for babies apply to "Swimming Wear". |
| Towels and Small products       | Towels, Bath towels, Handkerchiefs, Scarves, Neckties, Hosiery, Gloves, Caps/Hats, etc.   |
| Bedding and Furnishings         | Bedding (Bed sheets and spreads, Blankets, Summer quilts, Futons, Bedding for babies, etc.), Furnishings (Curtains, Carpets, Rugs, Bath mats, etc.)                                       |
| Natural leather                 | Natural leather for clothing (cow, horse, deer, pig, sheep, etc.)   |
| Synthetic leather               | Artificial leather, synthetic leather, etc. for clothing  |
| Ornamentation and Trimmings     | Ornamentation and Trimmings (Embroidery, Applique, Wappen, Spindle, Lace, Tape, Piping, Button, Zipper, etc.)   |
| Lining                          | Linings   |

# Boken Standard (Textile Products) Fabrics and Garments Performance Standards - Excerpted Version -

◎: Mandatory tests ○: Mandatory tests depending on fabrics and use

In principle, test all colors for colorfastness and formaldehyde testing, and test one color for each style number, design and material for fiber content, physical property, dimensional change and garment testing. (Formaldehyde is excluded.)

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| TEST ITEM                            | TEST METHOD                              | REQUIREMENT               |  |                             |  | REMARKS  |                               |   |  |   |   |   |           |             |             |  |
|--------------------------------------|--|---------------------------|--|-----------------------------|--|--|-------------------------------|---|--|---|---|---|-----------|-------------|-------------|--|
|                                      |  | Natural leather           | Synthetic leather  | Ornamentation and Trimmings | Lining   |  |                               |   |  |   |   |   |           |             |             |  |
| Fiber Content (Fiber Identification) | JIS L 1030                               |                           |  | ○ ---                       | ○ ---  | Apply to items required by law. Conduct fiber identification when it is suitable. Exclude from judgment of pass or fail. |                               |   |  |   |   |   |           |             |             |  |
| Leather Identification               | JIS L 1030 applied correspondingly       | ○ ---                     | ○ ---  |                             |  | Apply to leather disclosure. Exclude from judgment of pass or fail.  |                               |   |  |   |   |   |           |             |             |  |
| COLOR FASTNESS                       | Light                                    | min. Grade                | JIS L 0842<br>Exposure Method 3  | ◎ 3 (2)                     | ◎ 3  | 3  | 3                             | Value in ( ) applies to pale shades.<br>Yellowing due to fluorescent brightener is excluded from judgment of pass or fail.            |  |   |   |   |           |             |             |  |
|                                      |  |                           |  |                             |  |  |                               | Washing   | min. Grade   | JIS L 0844<br>No. A-1 or A-2  | Change in color   | 4   | 4         | 4           | 4           | Apply to washing instructions. Change in color due to fluorescent brightener is excluded from judgment of pass or fail.* |
|                                      |  |                           |  |                             |  |  |                               |   |  |   |   | Staining  | 3         | ○ 3 - 4     | ○ 3 - 4     | ○ 3 - 4  |
|                                      | 4  | 4                         | 4  | 4                           | Apply to fabrics with assorted colors of deep and pale shades. |  |                               |   |  |   |   |   |           |             |             |  |
|                                      | Perspiration                             | min. Grade                | JIS L 0848<br>Acid solution and Alkali solution  | Change in color             | 4 - 5  | 4 - 5  | 4 - 5                         | 4 - 5   |  |   |   |   |           |             |             |  |
|                                      |  |                           |  |                             | Staining   | 4  | ◎ 3 - 4                       | ◎ 3 - 4 (3)   | ◎ 3 - 4 (3)  | Value in ( ) applies to fabrics with 50 % or more wool and silk.  |   |   |           |             |             |  |
|                                      |  |                           |  |                             |  | 3  | 4                             | 4   | 4  | Apply to fabrics with assorted colors of deep and pale shades.  |   |   |           |             |             |  |
|                                      | Rubbing                                  | min. Grade                | JIS L 0849   | Type II                     | Dry  | ◎  | 4 (3 - 4)                     | 4 (3 - 4)   | 4 (3 - 4)  | Value in ( ) applies to fabrics with special prints, raising or deep shades.<br>Value in < > applies to denim, velveteen and corduroy.<br>*Apply to tape and piping. (For zipper, apply to tape.) |   |   |           |             |             |  |
|                                      |  |                           |  |                             |  |  |                               |   |  |   | Wet   | 3 - 4 (3)   | 2 - 3 (2) | ◎ 2 - 3 (2) | ◎ 2 - 3 (2) |  |
|                                      |  |                           | JIS L 0849<br>JIS K 6547   | Type II                     | Dry  | ◎  | 3 - 4 (3)                     | 2 (1 - 2)   |  |   |   | Value in ( ) applies to deep shade, suede, nubuck, etc. |           |             |             |  |
|                                      |  |                           |  |                             |  |  |                               |   |  |   | Wet   |   | 4         | 4           | 4           | 4  |
|                                      | Dry Cleaning                             | min. Grade                | JIS L 0860<br>Method A-1 (Perchloroethylene)<br>or<br>Method B-1 (Petroleum-base)          | Change in color             | 4  | 4  | 4                             | 4   | Apply to dry cleaning instructions.  |   |   |   |           |             |             |  |
|                                      |  |                           |  |                             | Staining   | 3  | ○ 3 - 4                       | ○ 3 - 4   | ○ 3 - 4  | [Reference] Liquid contamination: ≥ Grade 3   |   |   |           |             |             |  |
|                                      |  |                           |  |                             |  | 4  | 4                             | 4   | 4  | Apply to fabrics with assorted colors of deep and pale shades.  |   |   |           |             |             |  |
|                                      | Water                                    | min. Grade                | JIS L 0846   | Change in color             | 4  | 4  | 4                             | 4   |  |   |   |   |           |             |             |  |
| Staining                             |  |                           |  |                             | 3  | 3 - 4  | ◎ 3 - 4 (3)                   | ◎ 3 - 4 (3)   | Value in ( ) applies to fabrics with 50 % or more wool and silk.                   |   |   |   |           |             |             |  |
|                                      |  |                           |  |                             | 4  | 4  | 4                             | 4   | Apply to fabrics with assorted colors of deep and pale shades.                     |   |   |   |           |             |             |  |
| Water Spotting                       | min. Grade                               | JIS L 0853                | Change in color  | 4                           |  |  |                               |   |  |   |   |   |           |             |             |  |
|                                      |  |                           |  | Appearance                  | ◎ No change.   |  |                               |   |  |   |   |   |           |             |             |  |
| Bleeding                             | min. Grade                               | Daimaru Method (Method I) | Staining   | ○ 4 - 5                     | ○ 4 - 5  | ○ 4 - 5  | ○ 4 - 5                       | Natural leather shall not have deformation caused by swelling, etc.<br>Apply to fabrics with assorted colors of deep and pale shades. |  |   |   |   |           |             |             |  |
| PHYSICAL PROPERTY                    | Tensile Strength                         | min. N                    | JIS L 1096 Method A (Strip Method)   |                             |  | 200  |                               | 200 (150)   | Apply to woven fabrics. Value in ( ) applies to thin fabrics.                      |   |   |   |           |             |             |  |
|                                      | Tear Strength                            | min. N                    | JIS L 1096 Method D (Pendulum Method)  |                             |  | ○ 10   |                               | ○ 10 (7)  | Apply to woven fabrics. Value in ( ) applies to thin fabrics.                      |   |   |   |           |             |             |  |
|                                      | Bursting Strength                        | min. kPa                  | JIS L 1096 Method A (Mullen Type Method)   |                             |  | ○ 500  |                               | ○ 500 (350)   | Apply to knit fabrics. Value in ( ) applies to thin fabrics.                       |   |   |   |           |             |             |  |
|                                      | Slippage Resistance                      | max. mm                   | JIS L 1096 Method B (Seam Slipping Method)   |                             |  |  |                               | ○ 3   | Apply to woven fabrics. Load applied: Thick fabrics...117.7N, Thin fabrics...49.0N |   |   |   |           |             |             |  |
|                                      | Tensile Strength                         | min. N                    | JIS K 6552   | ◎                           | 50   |  |                               |   |  |   |   |   |           |             |             |  |
|                                      | Tear Strength                            | min. N                    | JIS K 6552   |                             | 10   |  |                               |   |  |   |   |   |           |             |             |  |
|                                      | Crack, Touch                             |                           | Cracking and Touching Test   |                             | No crack and smoothing to the touch                            |  |                               |   |  |   |   |   |           |             |             |  |
| PHYSICAL (ZIPPER) PROPERTY           | Appearance                               |                           | JIS S 3015   |                             |  |  | ○ Must be good.               |   | Apply to zipper.   |   |   |   |           |             |             |  |
|                                      | Chain Crosswise Strength                 |                           | JIS S 3015   |                             |  |  | ○ Must meet JIS requirements. |   | Apply to zipper.   |   |   |   |           |             |             |  |
|                                      | Overall Slider Strength                  |                           | JIS S 3015   |                             |  |  | ○ Must meet JIS requirements. |   | Apply to zipper.   |   |   |   |           |             |             |  |
|                                      | Pull and Slider Twist Strength           |                           | JIS S 3015   |                             |  |  | ○ Must meet JIS requirements. |   | Apply to zipper.   |   |   |   |           |             |             |  |
|                                      | Slider Lock                              |                           | JIS S 3015   |                             |  |  | ○ Must meet JIS requirements. |   | Apply to zipper with lock mechanism on slider                                      |   |   |   |           |             |             |  |
|                                      | Holding Strength                         |                           | JIS S 3015   |                             |  |  | ○ Must meet JIS requirements. |   | Apply to zipper of 20 cm or over.  |   |   |   |           |             |             |  |
|                                      | Opening and Closing of Zipper Durability |                           | JIS S 3015   |                             |  |  | ○ Must meet JIS requirements. |   | Apply to zipper.   |   |   |   |           |             |             |  |
|                                      | Slider Movement Resistance               |                           | JIS S 3015   |                             |  |  | ○ Must meet JIS requirements. |   | Apply to plated zipper.  |   |   |   |           |             |             |  |
| DIMENSIONAL CHANGE                   | Home Laundering Method                   | %                         | JIS L 0217<br>Washing: According to care instructions*.<br>Drying: Preference to line dry. | Line dry                    | Woven fabric   |  | ○ - 3 to + 2                  |   | ○ - 4 to + 2   | Apply to washing instructions. *Use Method 103 when no care instructions are proposed.  |   |   |           |             |             |  |
|                                      |  |                           |  |                             | Knit fabric  | Wale   |                               | ○ - 3 to + 2  |  |   | ○ - 5 to + 2  |   |           |             |             |  |
|                                      | Course                                   |                           |  |                             |  | ○ - 5 to + 2   |                               | ○ - 5 to + 2  |  |   |   |   |           |             |             |  |
|                                      | Dry Cleaning Method                      | %                         | JIS L 1096 Method J-1 or J-2   | Woven fabric                | ○  | ±2*  | ○ ±2                          |   | ○ ±2   |   | Apply to dry cleaning instructions. (Washing instructions may exclude this testing<br>*JIS L 1096 J-1 and J-2 Method applied correspondingly. |   |           |             |             |  |
| Knit fabric                          |  |                           |  |                             |  |  | ○ ±2                          |   | ○ ±2   |   |   |   |           |             |             |  |

\* White and gray fabrics may exclude the color fastness test unless the fabric has a possibility of color and/or feeling change.

\* When change in color due to fluorescent brightener is grade 3 - 4 or below, warnings such as "Use detergent without fluorescent brightener" shall be included in the care instructions.

\* "[Reference]" shall exclude from judgment of pass or fail.

# Boken Standard (Textile Products) Fabrics and Garments Performance Standards - Excerpted Version -

⊙: Mandatory tests ○: Mandatory tests depending on fabrics and use

In principle, test all colors for colorfastness and formaldehyde testing, and test one color for each style number, design and material for fiber content, physical property, dimensional change and garment testing. (Formaldehyde is excluded.)

www.boken.or.jp

| G A R M E N T | T E S T I N G | TEST ITEM                  |                     | TEST METHOD   | REQUIREMENT                                       |   |   |                         | Remarks |                   |                             |        |   |  |
|---------------|---------------|----------------------------|---------------------|---|---|---|---|-------------------------|---------|-------------------|-----------------------------|--------|---|--|
|               |               | L A B E L I N G            | A P P E A R A N C E | W A S H I N G R E S I S T A N C E   | R E P E A T E D W A S H I N G R E S I S T A N C E | D R Y C L E A N I N G R E S I S T A N C E | R E P E A T E D D R Y C L E A N I N G R E S I S T A N C E | Natural leather         |         | Synthetic leather | Ornamentation and Trimmings | Lining |   |  |
|               |               |                            |                     |   |   |   |   |                         |         |                   |                             |        |   |  |
|               |               | Fiber Content              |                     | Household Goods Quality Labeling Act  | ⊙   | Must be appropriate.                      | ⊙   | Must be appropriate.    |         |                   |                             |        |   |  |
|               |               | Care Instructions          |                     | Household Goods Quality Labeling Act  | ⊙   | Must be appropriate.                      | ⊙   | Must be appropriate.    |         |                   |                             |        |   |  |
|               |               | Size                       |                     | JIS, etc.   | ⊙   | Must be appropriate.                      | ⊙   | Must be appropriate.    |         |                   |                             |        | Exclude from judgment of pass or fail.  |  |
|               |               | Country of Origin          |                     | Act against Unjustifiable Premiums and Misleading Representations                         | ⊙   | Must be appropriate.                      | ⊙   | Must be appropriate.    |         |                   |                             |        |   |  |
|               |               | Appearance and Sewing      |                     | Boken Sewing Performance Standard   | ⊙   | Must meet requirements.                   | ⊙   | Must meet requirements. |         |                   |                             |        |   |  |
|               |               | Appearance and Sewing      |                     | JIS L 0217<br>Washing: According to care instructions.<br>Drying: Preference to line dry. | Line dry  | Woven fabric                              | ○   | No defects.             | ○       | No defects.       |                             |        | Apply to washing instructions.  |  |
|               |               | Change in Color            | min. Grade          |   |   | Knit fabric                               | ○   | 4                       | ○       | 4                 |                             |        |   |  |
|               |               | Bleeding                   | min. Grade          |   |   | Wale                                      | ○   | 4 - 5                   | ○       | 4 - 5             |                             |        |   |  |
|               |               | Puckering                  | min. Grade          |   |   | Course                                    | ○   | 3                       | ○       | 3                 |                             |        |   |  |
|               |               | Bias Filling after Washing | max. %              |   |   |   | ○   | 7 (5)                   | ○       | 7 (5)             |                             |        |   | Value in ( ) applies to slit, front opening, pattern in a longitudinal direction, etc. |
|               |               | Dimensional Change         | %                   |   |   |   | ○   | - 3 to + 2              | ○       | - 3 to + 2        |                             |        |   |  |
|               |               | Appearance Change          |                     | JIS L 0217<br>Method 103, Line dry  |   | Woven fabric                              | ○   | No defects.             | ○       | No defects.       |                             |        | Apply to fabrics with coating, flock finish, bonding finish and special prints (pigment, rubber printing, transfer printing, foam printing, lame), etc. |  |
|               |               | Change in Color            | min. Grade          |   |   | Knit fabric                               | ○   | 4                       | ○       | 4                 |                             |        |   |  |
|               |               | Bleeding                   | min. Grade          |   |   |   | ○   | 3                       | ○       | 3                 |                             |        |   |  |
|               |               | Puckering                  | min. Grade          |   |   |   | ○   | 4 - 5                   | ○       | 4 - 5             |                             |        |   |  |
|               |               | Appearance and Sewing      |                     | Professional Dry Cleaning Method<br>Perchloroethylene or Petroleum-base                   |   | Woven fabric                              | ○   | No defects.             | ○       | No defects.       |                             |        | Apply to dry cleaning instructions. (Washing instructions may exclude this testing.)  |  |
|               |               | Change in Color            | min. Grade          |   |   | Knit fabric                               | ○   | 4                       | ○       | 4                 |                             |        |   |  |
|               |               | Bleeding                   | min. Grade          |   |   |   | ○   | 4 - 5                   | ○       | 4 - 5             |                             |        |   |  |
|               |               | Puckering                  | min. Grade          |   |   |   | ○   | 3                       | ○       | 3                 |                             |        |   |  |
|               |               | Bias Filling after Washing | max. %              |   |   |   | ○   | 5 (3)                   | ○       | 5 (3)             |                             |        |   | Value in ( ) applies to slit, front opening, pattern in a longitudinal direction, etc. |
|               |               | Dimensional Change         | %                   |   |   |   | ○   | ±2                      | ○       | ±2                |                             |        |   |  |
|               |               | Appearance Change          |                     | Professional Dry Cleaning Method<br>Perchloroethylene or Petroleum-base                   |   | Woven fabric                              | ○   | No defects.             | ○       | No defects.       |                             |        | Apply to fabrics with coating, flock finish, bonding finish and special prints (pigment, rubber printing, transfer printing, foam printing, lame), etc. |  |
|               |               | Change in Color            | min. Grade          |   |   | Knit fabric                               | ○   | 4                       | ○       | 4                 |                             |        |   |  |
|               |               | Bleeding                   | min. Grade          |   |   |   | ○   | 3                       | ○       | 3                 |                             |        |   |  |
|               |               | Appearance Change          |                     |   |   |   | ○   | 4 - 5                   | ○       | 4 - 5             |                             |        |   |  |

| CATEGORY                        | ITEM  |
|---------------------------------|---|
| Men's wear                      | Coats, Suits, Jackets, Pants, etc.  |
| Women's and Children's wear     | Coats, Suits, Jackets, Dresses, Skirts, Pants, etc.   |
| Woven shirts and blouses        | Casual shirts, Dress shirts, Blouses, Sports shirts, etc.   |
| Knit shirts and blouses         | Casual shirts, Blouses, Sports shirts, Polo shirts, T-shirts, Training shirts, etc.   |
| Sweaters                        | Knit sweaters, Cardigans, Vests, etc.   |
| Night wear and Undergarments    | Pajamas, Negligees, Undergarments, Lingerie, Foundation garments, etc.  |
| Swimming wear                   | All swimming wear, Swimming caps, etc.  |
| Babies' wear and Small products | Babies' wear (Outer garments, Intermediate garments, Undergarments, etc.), Small products (Towels, Bibs, Mittens, Hosiery, etc.) Note: Swimming wear for babies apply to "Swimming Wear". |
| Towels and Small products       | Towels, Bath towels, Handkerchiefs, Scarves, Neckties, Hosiery, Gloves, Caps/Hats, etc.   |
| Bedding and Furnishings         | Bedding (Bed sheets and spreads, Blankets, Summer quilts, Futons, Bedding for babies, etc.), Furnishings (Curtains, Carpets, Rugs, Bath mats, etc.)                                       |
| Natural leather                 | Natural leather for clothing (cow, horse, deer, pig, sheep, etc.)   |
| Synthetic leather               | Artificial leather, synthetic leather, etc. for clothing  |
| Ornamentation and Trimmings     | Ornamentation and Trimmings (Embroidery, Applique, Wappen, Spindle, Lace, Tape, Piping, Button, Zipper, etc.)   |
| Lining                          | Linings   |