

Wangsan-ro 51, Yongdu-dong, Dongdaemun-gu, Seoul, Korea T : +82-2-3668-3000 F : +82-2-3668-2904 www.katri.re.kr



TEST REPORT

APPLICANT : HAERAE CO., LTD. BUYER :

 KATRI N0
 : SFBB20-00000099

 RECEIVED DATE
 : JAN. 13, 2020

 ISSUED DATE
 : JAN. 31, 2020

 PAGE(S)
 : 1 0F 6

APPLICANT'S PROVIDED SAMPLE DESCRIPTION :

ITEM: 40 COTTON TWILL SUBMITTED FIBER CONTENT: 100 % COTTON SUBMITTED CARE INSTRUCTION: MACHINE WASH WARM, NORMAL CYCLE, ONLY NON-CHLORINE BLEACH IF NEEDED, TUMBLE DRY LOW, WARM IRON IF NEEDED

| TEST ITEM - | TEST RESULT |
|---------------------------------------------------|----------------------------|
| | #1 |
| FIBER CONTENT (%) : AATCC 20A-2018 | |
| COTTON | 100 |
| <note> MOISTURE REGAIN : 8.00 % COTTON (BA</note> | SED ON ASTM D 1909 - 2013) |

- Continues -

Lim, Hun Jin Director General

Tested by Name : Hwang Kyu Ri

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Technical Manager : Kim Jung Min

Location of Test : Wangsan-ro 51, Yongdu-dong, Dongdaemun-gu, Seoul, Korea

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KATRI NO : SFBB20-00000099 PAGE(S) : 2 OF 6

| TEST ITEM | TEST RESULT |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| | #1 |
| DIMENSIONAL CHANGE TO WASHING (%) : AATCC 135-2018 | |
| WARP WEFT | -4.1 -3.7 |
| <pre><note> 1. WASHING CONDITION : MACHINE WASH (41 \pm 2. (+) MEANS EXTENSION (-) MEANS SHRINKAGE</note></pre> | |
| APPEARANCE AFTER WASHING : AATCC 135-2018 | |
| COLOR CHANGE SELF STAINING PILLING OVERALL RATING | 4.0 4.5 4.5 SLIGHT COLOR CHANGE WAS FOUND. |
| <note> WASHING CONDITION : MACHINE WASH (41 \pm 3)</note> | $^\circ$ C, NORMAL CYCLE, TUMBLE DRY LOW, 3 CYCLES |
| SKEWNESS CHANGE AFTER WASHING (%) : AATCC 179-2019 | |
| AFTER 3 CYCLES | +1.8 |
| <note> WASHING CONDITION : MACHINE WASH (41 \pm 3)</note> | $^\circ$ C, NORMAL CYCLE, TUMBLE DRY LOW, 3 CYCLES |
| HAND IRON (GRADE) : IN HOUSE METHOD | |
| WARM I RON | NO CHANGE(SAFE) |
| FABRIC WEIGHT (g/m²) : ASTM D 3776/D3776M-09a(2017) | OPTION C |
| | 122 (3.61 oz/yd ²) |
| YARN NUMBER (Tex) : ASTM D 1059-2017 | |
| WARP WEFT | 13.8 (42.8 's) 13.9 (42.5 's) |
| THREAD COUNT (Threads/25 mm) : ASTM D 3775-2017 | |
| WARP WEFT | 144 72 |
| WIDTH (cm) : ASTM D 3774-2018 OPTION B | |
| | 158.7 (62.5 inch) |

- Continues -

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KATRI NO : SFBB20-00000099 PAGE(S) : 3 OF 6

| TEST ITEM | TEST RESULT |
|-----------------------------------------------------|-----------------|
| | #1 |
| COLOR FASTNESS TO LAUNDERING (GRADE) : AATCC 61-201 | 3, 2A, 49 ℃ |
| SELF STAINING | 4.5 |
| COLOR CHANGE | 4.5 |
| COLOR STAINING - ACETATE | 4.5 |
| COLOR STAINING - COTTON | 4.5 |
| COLOR STAINING - NYLON | 4.5 |
| COLOR STAINING - POLYESTER | 4.5 |
| COLOR STAINING - ACRYLIC | 4.5 |
| COLOR STAINING - WOOL | 4.5 |
| COLOR FASTNESS TO RUBBING (GRADE) : AATCC 8-2016 CR | OCKMETER METHOD |
| DRY | 4.5 |
| WET | 2.5 |
| COLOR FASTNESS TO WATER (GRADE) : AATCC 107-2013 | |
| SELF STAINING | 4.5 |
| COLOR CHANGE | 4.5 |
| COLOR STAINING - ACETATE | 4.5 |
| COLOR STAINING - COTTON | 4.5 |
| COLOR STAINING - NYLON | 4.5 |
| COLOR STAINING - POLYESTER | 4.5 |
| COLOR STAINING - ACRYLIC | 4.5 |
| COLOR STAINING - WOOL | 4.5 |
| COLOR FASTNESS TO CHLORINE BLEACH (GRADE) : AATCC S | POT TEST |
| COLOR CHANGE | 1.0 |
| COLOR FASTNESS TO NON-CHLORINE BLEACH (GRADE) : AAT | CC SPOT TEST |
| COLOR CHANGE | 4.5 |

- Continues -

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KATRI NO : SFBB20-00000099 PAGE(S) : 4 OF 6

| TEST LIEM | TEST RESULT |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| TEST ITEM | #1 |
| DIMENSIONAL CHANGE TO WASHING (%) : AATCC 135-201 | 8 |
| WARP WEFT | -2.8 -2.5 |
| <pre><note> 1. WASHING CONDITION : MACHINE WASH (27 2. (+) MEANS EXTENSION (-) MEANS SHRINKA</note></pre> | |
| APPEARANCE AFTER WASHING : AATCC 135-2018 | |
| COLOR CHANGE SELF STAINING PILLING OVERALL RATING | 4.0 4.5 4.5 SLIGHT COLOR CHANGE WAS FOUND. |
| <note> WASHING CONDITION : MACHINE WASH (27 \pm</note> | 3) °C, GENTLE CYCLE, LINE DRY, 3 CYCLES |
| SKEWNESS CHANGE AFTER WASHING (%) : AATCC 179-201 | 9 |
| AFTER 3 CYCLES | +1.8 |
| <note> WASHING CONDITION : MACHINE WASH (27 \pm</note> | 3) °C, GENTLE CYCLE, LINE DRY, 3 CYCLES |
| HAND IRON (GRADE) : IN HOUSE METHOD | |
| WARM IRON | NO CHANGE(SAFE) |
| COLOR FASTNESS TO LAUNDERING (GRADE) : REF. AATCO | C 61-2013, 2A, 30 ℃ |
| SELF STAINING COLOR CHANGE COLOR STAINING - ACETATE COLOR STAINING - COTTON COLOR STAINING - NYLON COLOR STAINING - POLYESTER COLOR STAINING - ACRYLIC COLOR STAINING - WOOL | 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 |

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KATRI NO : SFBB20-00000099 PAGE(S) : 5 OF 6

| TEST ITEM | TEST RESULT |
|-----------|-------------|
| | #1 |

CONCLUSION & RECOMMENDATION :

BASED UPON THE RESULTS, WE RECOMMEND TO READ THE CARE INSTRUCTIONS AS FOLLOWS.

MACHINE WASH COLD GENTLE CYCLE ONLY NON-CHLORINE BLEACH IF NEEDED LINE DRY WARM IRON IF NEEDED

- Continues -

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KATRI NO : SFBB20-00000099 PAGE(S) : 6 OF 6

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