West Yorkshire
Materials Testing Service
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# TEST CERTIFICATE

| | |
|---|---|
| **Client:** | Ariteks Boyacilik Ticaret ve Sanayi As<br>Hekimsuyu Cad No: 36 Kucukkoy<br>34250<br>Istanbul/Turkey |
| **Entry No:** | 97817-01 (Amended) |
| **Date received:** | 10/04/2018 and 22/05/2018 |
| **Client's Description:** | Woven fabric :<br>1-) ArGiyim 245-5086,<br>Composition: 80% polyester 20%Cotton<br>Weight: 220-250 gr/m2,<br>Colour: hv yellow |
| **Tests Required:** | BS EN ISO 20471: 2013<br>Clause 5.1.1 Colour performance requirements of background material<br>Clause 5.2 Colour after xenon test of background materials<br>Clause 5.3.1 Colour fastness to rubbing[F]<br>Clause 5.3.2 Colour fastness to perspiration<br>Clause 5.3.3 Colour fastness to washing<br>Clause 5.3.3 Colour fastness to drycleaning<br>Clause 5.3.3 Colour fastness to hypochlorite bleaching<br>Clause 5.3.3 Colour fastness to hot pressing[N]<br>Clause 5.4 Dimensional change<br>Clause 5.5.1 Tensile Strength<br>Clause 7.5.1 Colour after ageing of background materials |
| **Pre-treatment:** | Tests in clauses 5.4 and 7.5.1 were made after five washing cycles in accordance with ISO 6330: 2012 Procedure 4N at 40ºC Drying Procedure B: Drip line. The drip line drying was carried out after the completion of each wash. |
| **Conditioning:** | In accordance with BS EN ISO 139: 2005 for a minimum of 24 hours at 65+/-4%, Relative Humidity, 20+/-2ºC |
| **Date Tests Completed:** | 21/05/2018 |

Test results in clauses 5.3.1 and 5.3.2 were taken from the sample submitted on 22/05/2018, all over test results were made on the sample submitted on 10/04/2018

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*This is hereby certified to be a correct return of the tests made of the items referred to herein*

Natalie Teal
Technologist
Date of original 29/06/2018
Date of amended 29/06/2018

- Unless instructed otherwise by the client sample remnants will be disposed of after 28 days.
- Tests marked [N] in this certificate are not included in the UKAS Accreditation Schedule for this Laboratory.
- Tests marked [F] in this certificate are performed under the Laboratory's Flexible Scope of Accreditation.
- Tests marked [S] in this certificate have been subcontracted to another ISO17025 Accredited Laboratory.
- Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.
- Uncertainty budgets for test methods contained within this report are available on request.

This Certificate relates only to the sample received and, unless that sample has been drawn by the staff of this laboratory, or its agent, and endorsed accordingly, any application of the result to a bulk quantity or other material is entirely the responsibility of the client.

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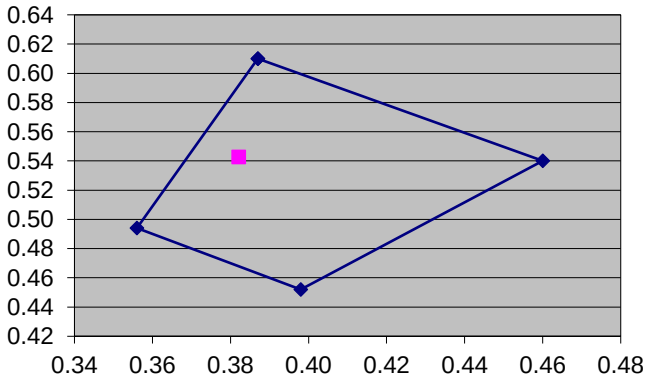
West Yorkshire Materials Testing Service

**Client:** Ariteks Boyacilik Ticaret ve Sanayi As

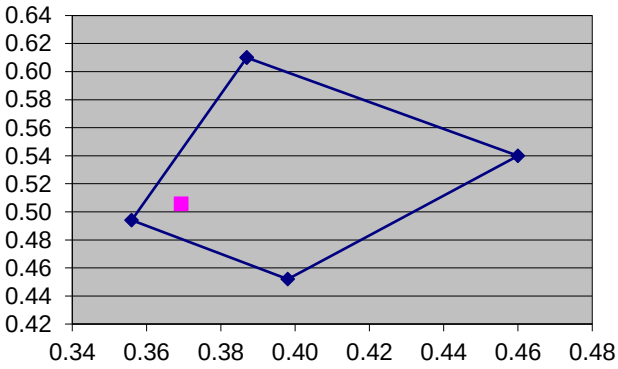
**Entry No:** 97817-01

| BS EN ISO 20471: 2013 Clauses 5.1.1 and 5.2 | Coordinates | | Minimum Luminance factor β min | Pass/Fail |
|---|---|---|---|---|
| Fluorescent Yellow | x<br>0,387<br>0,356<br>0,398<br>0,460 | y<br>0,610<br>0,494<br>0,452<br>0,540 | 0.70 | |
| Clause 5.1.1 As received | x = 0.3821 | y = 0.5426 | Luminance factor = 0.98 | Coordinates PASS<br>Luminance PASS |
| Clause 5.2 After xenon | x = 0.3693 | y = 0.5058 | Luminance factor = 0.91 | Coordinates PASS<br>Luminance PASS |

**As Received**




**After Xenon**

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**Entry No:** 97817-01

## Colour Fastness to Dry Rubbing - BS EN ISO 20471 Clause 5.3.1 (ISO 105: X12: 2002)[F]

| | Result | Specification |
|---|---|---|
| Length Way | **4-5** | 4 |
| Width Way | **5** | 4 |

**Comments**
This fabric meets the requirements of BS EN ISO 20471:2013 for fastness to rubbing.

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## Colour Fastness to Perspiration - BS EN ISO 20471 Clause 5.3.2 (ISO 105 E04: 2013)

| | Result | | Specification |
|---|---|---|---|
| Staining of Multifibre | Acid | Alkali | |
| Acetate | **4-5** | **4-5** | 4 |
| Cotton | **4-5** | **4-5** | 4 |
| Nylon | **4** | **4** | 4 |
| Polyester | **4-5** | **5** | 4 |
| Acrylic | **5** | **4-5** | 4 |
| Wool | **4-5** | **4** | 4 |
| Change in Colour | **5** | **5** | 4 |

**Comments**
This fabric meets the requirements of BS EN ISO 20471: 2013 for fastness to perspiration.

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## Colour Fastness to Washing – BS EN ISO 20471 Clause 5.3.3 ISO 105: C06: 2010 Procedure A2S (40°C)

| | Result | Specification |
|---|---|---|
| Staining of Multifibre | | |
| Acetate | **3-4** | 4 |
| Cotton | **4** | 4 |
| Nylon | **3** | 4 |
| Polyester | **4** | 4 |
| Acrylic | **4-5** | 4 |
| Wool | **4** | 4 |
| Change in Colour | **5** | 4-5 |

**Comments**
This fabric meets the requirements of BS EN ISO 20471: 2013 for fastness to washing except when in contact with acetate and nylon.

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**Client:** Ariteks Boyacilik Ticaret ve Sanayi As

**Entry No:** 97817-01

**Colour Fastness to Dry Cleaning – BS EN ISO 20471 Clause 5.3.3 ISO 105: D01: 2010**

| | Result | Specification |
|---|---|---|
| Staining of Multifibre | | |
| Acetate | **5** | 4 |
| Cotton | **4-5** | 4 |
| Nylon | **5** | 4 |
| Polyester | **4-5** | 4 |
| Acrylic | **4** | 4 |
| Wool | **4-5** | 4 |
| Change in Colour | **4-5** | 4 |

**Comments**
This fabric meets the requirements of BS EN ISO 20471: 2013 for fastness to drycleaning.

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**Colour Fastness to Hypochlorite bleaching – BS EN ISO 20471 Clause 5.3.3 (ISO 105-N01: 1993)**

| Result | Specification |
|---|---|
| **5** | 4 |

**Comments**
This fabric meets the requirements of BS EN ISO 20471: 2013 for fastness to Bleaching.

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**Colour Fastness to Hot Pressing– BS EN ISO 20471 Clause 5.3.3 (ISO 105-X11: 1994)[N]**
**(150°C Dry/Dry)**

| | Result | | Specification |
|---|---|---|---|
| | After Test | After 4 Hours | |
| Staining of cotton | **4** | **N/A** | 4 |
| Colour Change | **4-5** | **4-5** | 4-5 |

**Comments**
This fabric meets the requirements of BS EN ISO 20471: 2013 for fastness to hot pressing.

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**Dimensional Stability – BS EN ISO 20471 Clause 5.4, ISO 13688: 2012 (ISO 5077: 2008)**

| | Result | Specification |
|---|---|---|
| Length | -0.5% | ± 5% (knitted), ± 3% (woven) |
| Width | 0% | ± 5% (knitted), ± 3% (woven) |

**Comments**
This fabric meets the requirements of BS EN ISO 20471: 2013 for dimensional change.

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**Tensile Strength – BS EN ISO 20471 Clause 5.5.1, (ISO 13934-1)**

| | Result | Specification |
|---|---|---|
| Warp/Length | 2300N | 100 N |
| Weft/Width | 480N | 100 N |

**Comments**
This fabric meets the requirements of BS EN ISO 20471: 2013 for Tensile Strength.

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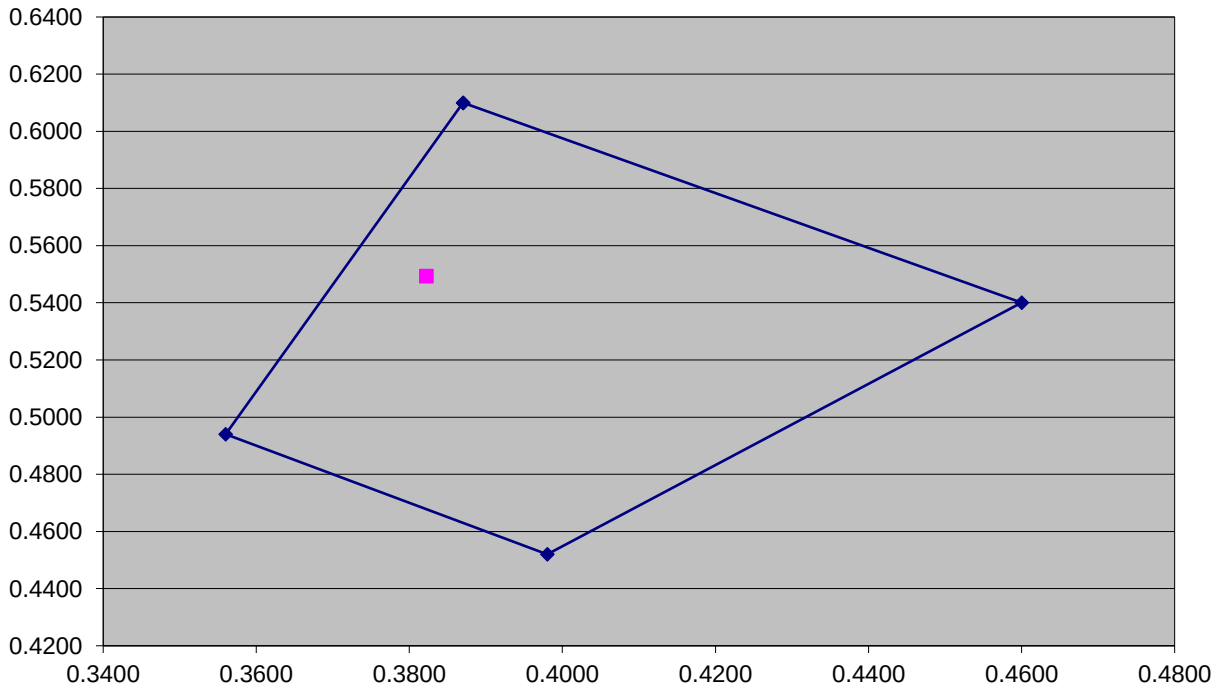
| BS EN ISO 20471:2013 Clause 7.5.1 | Coordinates | | Minimum Luminance factor β min | Pass/Fail |
|---|---|---|---|---|
| Fluorescent Yellow | x<br>0,387<br>0,356<br>0,398<br>0,460 | y<br>0,610<br>0,494<br>0,452<br>0,540 | 0.70 | |
| Clause 7.5.1 After ageing | x = 0.3822 | y = 0.5494 | Luminance factor = 0.99 | Coordinates PASS<br>Luminance PASS |

**After Ageing**

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