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Textiles — Tests for colour fastness —

Part F02: Specification for cotton and viscose adjacent fabrics

Textiles — Essais de solidité des teintures —

Partie F02: Spécifications pour les tissus témoins en coton et en viscose

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 105-F02 was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 1, *Tests for coloured textiles and colorants*.

This first edition cancels and replaces Section F02 of the third edition of ISO 105-F (ISO 105-F:1985), which has been technically revised.

ISO 105 was previously published in 13 “parts”, each designated by a letter (e.g. “Part A”), with publication dates between 1978 and 1985. Each part contained a series of “sections”, each designated by the respective part letter and by a two-digit serial number (e.g. “Section A01”). These sections are now being republished as separate documents, themselves designated “parts” but retaining their earlier alphanumeric designations. A complete list of these parts is given in ISO 105-A01.

Textiles — Tests for colour fastness —

Part F02:
Specification for cotton and viscose adjacent fabrics

1 Scope

This part of ISO 105 specifies an undyed cotton (and an undyed viscose) adjacent fabric which may be used for the assessment of staining in colour fastness tests. The staining properties of the cotton (and viscose) adjacent fabric under test are assessed against a cotton (and a viscose) reference adjacent fabric, using a cotton dyed reference fabric, all of which are available from a specified source.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 105-A02, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*

ISO 105-A05, *Textiles — Tests for colour fastness — Part A05: Instrumental assessment of change in colour for determination of grey scale rating*

ISO 105-C10:2006, *Textiles — Tests for colour fastness — Part C10: Colour fastness to washing with soap or soap and soda*

ISO 105-J01, *Textiles — Tests for colour fastness — Part J01: General principles for measurement of surface colour*

ISO 105-J02, *Textiles — Tests for colour fastness — Part J02: Instrumental assessment of relative whiteness*

ISO 3071, *Textiles — Determination of pH of aqueous extract*

ISO 3801, *Textiles — Woven fabrics — Determination of mass per unit length and mass per unit area*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
cotton adjacent fabric under test
cotton adjacent fabric complying with the requirements in 4.1

3.2
cotton reference adjacent fabric
cotton reference adjacent fabric complying with the requirements in 4.1

3.3
cotton dyed reference fabric
cotton dyed reference fabric complying with the requirements in 4.1 and dyed with C.I. Direct Blue 71

3.4
viscose adjacent fabric under test
viscose adjacent fabric complying with the requirements in 4.2

3.5
viscose reference adjacent fabric
viscose reference adjacent fabric complying with the requirements in 4.2

NOTE Cotton reference adjacent fabric (3.2), cotton dyed reference fabric (3.3), and viscose reference adjacent fabric (3.5) are only available from l'Institut français du textile et de l'habillement, Direction régionale Est, 25 rue Alfred Werner, 68059 Mulhouse Cedex 2, France.

4 Specification for the adjacent fabrics

4.1 Specification for the cotton adjacent fabric

The fabric shall have the following properties:

4.1.1 Mass per unit area: (115 ± 5) g/m^2 determined in accordance with ISO 3801.

4.1.2 Whiteness value: $Y_{10} = 89 \pm 2$

$W_{10} = 80 \pm 3$

$T_{10} = -1 \pm 1$

Measurements shall be made with the specular component included in accordance with ISO 105-J01, excluding 0/45 (45/0). Luminance (Y_{10}), whiteness (W_{10}) and tint (T_{10}) values shall be calculated using CIE standard illuminant D65 and CIE 1964 supplementary standard colorimetric observer (10° observer) in accordance with ISO 105-J02.

Measure the whiteness degree of at least a four-layer adjacent fabric to obtain a uniform whiteness measurement.

4.1.3 The pH of the aqueous extract: the pH shall be 7,0 ± 0,5 when determined by the method specified in ISO 3071.

NOTE Information about the production of the cotton reference adjacent fabric is included in a report by the co-secretariats of ISO/TC 38/SC 1.

4.2 Specification for the viscose adjacent fabric

The fabric shall have the following properties:

4.2.1 Mass per unit area: (140 ± 5) g/m^2, determined in accordance with ISO 3801.

4.2.2 Whiteness value: $Y_{10} = 85 \pm 5$

$W_{10} = 75 \pm 6$

$T_{10} = -1{,}0 \pm 1{,}2$

Measurements shall be made with the specular component included in accordance with ISO 105-J01, excluding 0/45 (45/0). Luminance (Y_{10}), whiteness (W_{10}) and tint (T_{10}) values shall be calculated using CIE standard illuminant D65 and CIE 1964 supplementary standard colorimetric observer (10° observer) in accordance with ISO 105-J02.

Measure the whiteness degree of at least a four-layer adjacent fabric to obtain uniform whiteness measurement.

4.2.3 The pH of the aqueous extract: the pH shall be 7,0 ± 0,5 when determined by the method specified in ISO 3071.

NOTE Information about the production of the viscose reference adjacent fabric is included in a report by the co-secretariats of ISO/TC 38/SC 1.

5 Assessment of staining properties of cotton and viscose adjacent fabrics under test

5.1 General

As adjacent fabrics are required to yield reproducible results when used in colour fastness tests, their most important property is standardized staining characteristics.

The staining characteristics of the cotton adjacent fabric under test shall conform to those of the cotton reference adjacent fabric when tested using the cotton dyed reference fabric.

The staining characteristics of the viscose adjacent fabric under test shall conform to those of the viscose reference adjacent fabric when tested using the cotton dyed reference fabric.

5.2 Test procedure

5.2.1 Test procedure for cotton adjacent fabric under test

Place a cotton dyed reference fabric between the cotton adjacent fabric under test and the cotton reference adjacent fabric. To eliminate possible differences in test conditions, use both the cotton adjacent fabric under test and the cotton reference adjacent fabric in the same composite specimen. Test the specimen in accordance with ISO 105-C10:2006, test number A (1).

NOTE Information about the production of the cotton dyed reference fabric is included in a report by the co-secretariats of ISO/TC 38/SC 1.

5.2.2 Test procedure for viscose adjacent fabric under test

Place a cotton dyed reference fabric between the viscose adjacent fabric under test and the viscose reference adjacent fabric. To eliminate possible differences in test conditions, use both the viscose adjacent fabric under test and the viscose reference adjacent fabric in the same composite specimen. Test the specimen in accordance with ISO 105-C10:2006, test number A (1).

5.3 Performance requirements

The colour difference between the stain on the cotton adjacent fabric under test and the stain on the cotton reference adjacent fabric shall not be greater than 4-5 when evaluated using the grey scale for assessing change in colour, in accordance with ISO 105-A02 or ISO 105-A05.

The colour difference between the stain on the viscose adjacent fabric under test and the stain on the viscose reference adjacent fabric shall not be greater than 4-5 when evaluated using the grey scale for assessing change in colour, in accordance with ISO 105-A02 or ISO 105-A05.

Bibliography

[1] ISO 105-A01, *Textiles — Tests for colour fastness — Part A01: General principles of testing*

[2] CIE Publication No. 15:2004, *Colorimetry*, 3rd ed.