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Textiles — Tests for colour fastness —

Part F01: Specification for wool adjacent fabric

Textiles — Essais de solidité des teintures —

Partie F01: Spécifications pour le tissu témoin en laine

Reference number
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Case postale 56 • CH-1211 Geneva 20
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Fax + 41 22 749 09 47
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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 part of ISO 105 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 105-F01 was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 1, *Tests for coloured textiles and colorants*.

This first edition of ISO 105-F01 cancels and replaces Section F01 of the third edition of ISO 105-F:1985, which has been technically revised.

ISO 105 was previously published in thirteen “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 F01:
Specification for wool adjacent fabric

1 Scope

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

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 105. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 105 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 105-A02:1993, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*.

ISO 105-A03:1993, *Textiles — Tests for colour fastness — Part A03: Grey scale for assessing staining*.

ISO 105-C02:1989, *Textiles — Tests for colour fastness — Part C02: Colour fastness to washing: Test 2*.

ISO 105-E01:1994, *Textiles — Tests for colour fastness — Part E01: Colour fastness to water*.

ISO 105-F02:—[1)], *Textiles — Tests for colour fastness — Part F02: Specification for cotton and viscose adjacent fabrics*.

ISO 105-J01:1997, *Textiles — Tests for colour fastness — Part J01: General principles for measurement of surface colour*.

ISO 3071:1980, *Textiles — Determination of pH of the aqueous extract*.

ISO 3072:1975, *Wool — Determination of solubility in alkali*.

ISO 3074:1975, *Wool — Determination of dichloromethane-soluble matter in combed sliver*.

ISO 3801:1977, *Textiles — Woven fabrics — Determination of mass per unit length and mass per unit area*.

1) To be published. (Revision of Section F02 of ISO 105-F:1985)

3 Materials

3.1 Wool adjacent fabric under test, in accordance with the requirements of clause 4.

3.2 Wool reference adjacent fabric, in accordance with the requirements of clause 4.

3.3 Cotton dyed reference fabric, in accordance with the requirements of ISO 105-F02 and dyed with 1,5 % C.I. Direct Red 16.

3.4 Wool dyed reference fabric, in accordance with the requirements of clause 4 and dyed with 3 % C.I. Acid Red 42.

3.5 Wool dyed reference fabric, in accordance with clause 4 and dyed with 2 % C.I. Acid Red 42 (approximately one-third lighter than the fabric in clause 3.4).

NOTE The wool reference adjacent fabric, the two wool dyed reference fabrics and the cotton dyed reference fabric are only available from Deutsche Echtheitskommission, c/o WIWEB, Landshuter Str. 70, D-85435 Erding.

4 Specification for the wool adjacent fabric

The fabric shall have the following properties.

Mass per unit area: (125 ± 5) g/m^2 determined in accordance with ISO 3801.

Colour specification: the CIE chromaticity coordinates for CIE standard illuminant D_{65} and CIE 1964 supplementary standard colorimetric observer (10° observer) are determined in accordance with ISO 105-J01:

$$x_{10} = 0{,}337 \pm 0{,}002$$

$$y_{10} = 0{,}356 \pm 0{,}002$$

with the luminance factor

$$Y_{10} = 72 \pm 2$$

The yellowness (G) of the fabric shall be $G = 25 \pm 2$ when determined by the formula:

$$G = \frac{1{,}301 X_{10} - 1{,}149 Z_{10}}{Y_{10}} \times 100$$

NOTE Formula described in DIN 6167.

The pH of the aqueous extract shall be $7{,}5 \pm 0{,}5$ when determined by the method described in ISO 3071.

The mass fraction of residual dichloromethane-soluble matter shall be $(0{,}5 \pm 0{,}1)$ % when determined by the method described in ISO 3074.

The solubility in alkali shall not exceed a mass fraction of 18 % when determined by the method described in ISO 3072.

NOTE Information about the production of the wool adjacent fabric, the cotton dyed reference fabric and the two wool dyed reference fabrics is held in a report by the co-secretariats of ISO/TC 38/SC1.

5 Assessment of staining properties of the wool adjacent fabric 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 wool adjacent fabric under test shall conform to those of the wool reference adjacent fabric when tested using the cotton dyed reference fabric and the wool dyed reference fabrics.

5.2 Test procedure

Place the cotton dyed reference fabric (3.3) between the wool adjacent fabric under test (3.1) and the wool reference adjacent fabric (3.2). To eliminate possible differences in test conditions, use both the wool adjacent fabric under test and the wool reference adjacent fabric in the same composite specimen. Test the specimen according to ISO 105-E01.

Repeat the test using the wool dyed reference fabric (3.4) in place of the cotton dyed reference fabric.

Make another specimen with the wool dyed reference fabric (3.5) and test the specimen according to ISO 105-C02.

5.3 Performance requirements

The staining of the wool adjacent fabric under test shall give the following results when evaluated using the grey scale for assessing staining, in accordance with ISO 105-A03:

— colour fastness to water using the cotton dyed reference fabric (3.3): 2-3;

— colour fastness to water using the wool dyed reference fabric (3.4): 2-3;

— colour fastness to washing using the wool dyed reference fabric (3.5): 3.

The colour difference between the wool adjacent fabric under test and the standard wool 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.

Bibliography

[1] ISO 105-A01:1994, *Textiles — Tests for colour fastness — Part A01: General principles of testing*.

[2] DIN 6167:1980, *Description of yellowness of near-white or near-colourless materials*.

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