INTERNATIONAL STANDARD

ISO 105-F09

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Textiles — Tests for colour fastness —

Part F09: Specification for cotton rubbing cloth

Textiles — Essais de solidité des teintures —

Partie F09: Spécifications pour le tissu témoin de frottement en coton

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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-F09 was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 1, *Tests for coloured texiles and colourants*.

This first edition cancels and replaces Section F09 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 F09:
Specification for cotton rubbing cloth

1 Scope

This part of ISO 105 specifies a cotton rubbing cloth which can be used for the assessment of staining in colour fastness to rubbing tests. The staining properties of the cotton rubbing cloth under test are assessed against a cotton rubbing cloth reference fabric, using a cotton dyed reference fabric, both 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-F02:2009, *Textiles — Tests for colour fastness — Part F02: Specification for cotton and viscose adjacent fabrics*

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 105-X12, *Textiles — Tests for colour fastness — Part X12: Colour fastness to rubbing*

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 rubbing cloth under test
cotton rubbing cloth complying with the requirements in Clause 4

3.2
cotton rubbing cloth reference fabric
cotton reference cloth reference fabric complying with the requirements in Clause 4

NOTE Cotton rubbing cloth reference fabric is only available from Testfabrics Inc., PO Box 26, West Pittston, PA 18643 USA; Tel: +1.570.603-0432; Fax: +1.570.603-0433; email: info@testfabrics.com.

3.3
cotton dyed reference fabric
cotton reference fabric complying with ISO 105-F02 and dyed with C.I. Direct Blue 71

NOTE Cotton dyed reference fabric is only available from l'Institut francais du textile et de l'habillement, Direction régionale Est, 25, rue Alfred Werner, 68059 Mulhouse Cedex 2, France

4 Specification for cotton rubbing cloth

The fabric shall have the following properties.

4.1 Mass per unit area: (110 ± 5) g/m^2, determined in accordance with ISO 3801.

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

$W_{10} = 78 \pm 3$

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

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 cotton rubbing cloth to obtain a uniform whiteness measurement.

4.3 Residual oil content: less than 1 %.

4.4 The pH of the aqueous extract: the pH shall be 7,5 ± 1,0 when determined by the method specified in ISO 3071.

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

5 Assessment of staining properties of cotton rubbing cloth under test

5.1 General

As cotton rubbing cloths are required to yield reproducible results when used in colour fastness to rubbing tests, their most important property is standardized staining characteristics. The staining characteristics of the cotton rubbing cloth under test shall conform to those of the cotton rubbing cloth reference fabric when performing colour fastness to rubbing tests on the cotton dyed reference fabric.

5.2 Test procedure

Conduct tests in accordance with ISO 105-X12, using the cotton dyed reference fabric, with ten pieces of cotton rubbing cloth under test and with ten pieces of cotton rubbing cloth reference fabric.

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.

5.3 Performance requirements

The colour difference between the mean of the ten pieces of cotton rubbing cloth under test and the mean of the ten pieces of cotton rubbing cloth reference 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.