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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Textiles — Tests for colour fastness —

Part D01:
Colour fastness to dry cleaning

Textiles — Essais de solidité des teintures —

Partie D01: Solidité des teintures au nettoyage à sec

Reference number
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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 105-D01 was prepared by Technical Committee ISO/TC 38, *Textiles.*

This third edition cancels and replaces the second edition (included in ISO 105-D : 1982), of which it constitutes a minor revision.

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-A01.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Textiles — Tests for colour fastness —

Part D01:
Colour fastness to dry cleaning

1 Scope and field of application

1.1 This part of ISO 105 specifies a method for determining the resistance of the colour of textiles of all kinds and in all forms to dry cleaning.

1.2 This method is not suitable for the evaluation of the durability of textile finishes, nor is it intended for use in evaluating the resistance of colours to spot and stain removal procedures used by the dry-cleaner (see 8.1 and 8.2).

2 References

ISO 105, *Textiles — Tests for colour fastness —*

Part A01: General principles of testing.

Part A02: Grey scale for assessing change in colour.

Part A03: Grey scale for assessing staining.

3 Principle

A specimen of the textile in contact with a cotton fabric bag together with non-corrodible steel discs is agitated in perchloroethylene (see 8.2 and 8.3), then squeezed or centrifuged, and dried in hot air. The change in colour of the specimen is assessed with the grey scale for assessing change in colour. At the conclusion of the test, the coloration of the solvent is assessed by comparing the filtered solvent with unused solvent by transmitted light, by means of the grey scale for assessing staining.

4 Apparatus and reagent

4.1 Suitable mechanical device (see 8.4) consisting of a water bath containing a rotatable shaft which supports, radially, glass or stainless steel containers (4.2), the bottom of the containers being 45 ± 10 mm from the centre of the shaft. The shaft/container assembly is rotated at a frequency of 40 ± 2 min^{-1}. The temperature of the water bath is thermostatically controlled to maintain the test solvent at 30 ± 2 °C.

4.2 Glass or stainless steel containers, of 75 ± 5 mm diameter and 125 ± 10 mm high, of 550 ± 50 ml capacity, which shall be closed using solvent-resistant gaskets.

4.3 Non-corrodible (stainless) steel discs, 30 ± 2 mm × 3 ± 0,5 mm, smooth and free from rough edges, of mass 20 ± 2 g.

4.4 Undyed cotton "twill" cloth of mass per unit area 270 ± 70 g/m^2, free from finishes and cut into samples 12 cm × 12 cm.

4.5 Perchloroethylene, which shall be stored over anhydrous sodium carbonate to neutralize any hydrochloric acid formed.

4.6 Grey scales for assessing change in colour and staining (see clause 2).

4.7 Glass tubes, of diameter 25 mm.

5 Test specimen

5.1 If the material to be tested is a textile fabric, use a specimen 10 cm × 4 cm.

5.2 If the textile to be tested is yarn, knit it into a fabric and use a specimen 10 cm × 4 cm or make a wick of parallel lengths 10 cm long and about 0,5 cm in diameter, tied near both ends.

5.3 If the textile to be tested is loose fibre, comb and compress enough of it to form a sheet 10 cm × 4 cm.

6 Procedure

6.1 Prepare a bag with inside dimensions of 10 cm × 10 cm using the undyed cotton twill cloth (4.4) by sewing together two squares of this cloth around three sides. Place the specimen and 12 steel discs (4.3) inside the bag. Close the bag by any convenient means.

6.2 Place the bag containing the specimen and the steel discs in the container and add 200 ml of perchloroethylene at 30 ± 2 °C. Treat the specimen for 30 min at 30 ± 2 °C in the specified equipment (4.1).

6.3 Remove the bag from the container, withdraw the specimen, place it between absorbent paper or cloth and squeeze or centrifuge to remove surplus solvent. Dry the specimen by hanging it in air at a temperature of 60 ± 5 °C.

6.4 Assess the change in colour of the specimen with the grey scale for assessing change in colour.

6.5 At the conclusion of the test, filter the solvent remaining in the container through filter paper. By means of the grey scale for assessing staining, compare the colour of the filtered solvent with that of unused solvent, in the glass tube (4.7) placed in front of a white card, using transmitted light.

7 Test report

Report the numerical rating for the change in colour of the specimen and the numerical rating for staining of the solvent.

8 Notes

8.1 This test covers colour fastness to dry cleaning only; commercial dry-cleaning practice normally involves other operations such as water spotting, solvent spotting, steam pressing, etc., for which other standard test methods are available if the full "dry cleanability" of the textile is to be assessed.

8.2 The presence of absorbed water in either the fabric or the dry-cleaning solution, or the presence of a detergent and water in the dry-cleaning solution, has not been found to be a critical factor in assessing colour fastness. This test gives results which correlate satisfactorily with those obtained in commercial dry cleaning.

8.3 Fastness to dry cleaning, without further qualification, means fastness to dry cleaning in perchloroethylene. However, if required, other solvents may be used and this should be indicated in the test report.

8.4 Other mechanical devices may be used for the test, provided that the results are identical with those obtained by the apparatus described in 4.1.

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