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BRITISH STANDARD

BS EN ISO
105-X10:1996

Textiles — Tests for colour fastness —

Part X10: Assessment of migration of textile colours into polyvinyl chloride coatings

The European Standard EN ISO 105-X10:1995 has the status of a British Standard

ICS 59.080.10

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee TCI/25, Chemical properties, upon which the following bodies were represented:

Association of Consulting Scientists
Association of Suppliers to the British Clothing Industry
British Apparel and Textile Confederation
British Clothing Industry Association
British Measurement and Testing Association
British Retail Consortium
Chemical Industries Association
Consumer Policy Committee of BSI
Fabric Care Research Association Ltd.
Home Laundering Consultative Council
International Wool Secretariat
Mail Order Traders' Association
Ministry of Defence
National Wool Textile Export Corporation
SATRA Footwear Technology Centre
Soap and Detergent Industry Association
Society of Dyers and Colourists
Textile Finishers' Association

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National foreword

This British Standard has been prepared by Technical Committee TCI/25 and is the English language version of EN ISO 105-X10:1995 *Textiles — Tests for colour fastness — Part X10 Assessment of migration of textile colours into polyvinyl chloride coatings,* published by the European Committee for Standardization (CEN). It was derived by CEN from ISO 105-X10:1993, published by the International Organization for Standardization (ISO).

This British Standard supersedes the corresponding method in BS 1006:1990, which is withdrawn by amendment.

Cross-references

Publication referred to	Corresponding British Standard
ISO 105-A01:1989	BS EN ISO 105 *Textiles — Tests for colour fastness* Part A01:1996 *General principles of testing*
ISO 105-A03:1993	BS EN 20105 *Textiles — Tests for colour fastness* Part A03:1995 *Grey scale for assessing staining*

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN ISO title page, pages 2 to 6, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

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EUROPEAN STANDARD

NORME EUROPÉENNE

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English version

Textiles — Tests for colour fastness — Part X10: Assessment of migration of textile colours into polyvinyl chloride coatings

(ISO 105-X10:1993)

Textiles — Essais de solidité des teintures — Partie X10: Evaluation de la migration des teintures des textiles dans les enductions de polychlorure de vinyle
(ISO 105-X10:1993)

Textilien — Farbechtheitsprüfungen — Teil X10: Bestimmung der Migration von Textilfarbstoffen in Polyvinylchlorid-Beschichtungen
(ISO 105-X10:1993)

This European Standard was approved by CEN on 1995-07-28. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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European Committee for Standardization
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Foreword

The text of the International Standard from ISO/TC 38, Textiles, of the International Organization for Standardization (ISO) has been taken over as a European Standard by the Technical Committee CEN/TC 248, Textiles and textile products.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 1996, and conflicting national standards shall be withdrawn at the latest by May 1996.

According to CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

NOTE Normative references to International Standards are listed in Annex ZA (normative).

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1 Scope

This part of ISO 105 specifies a method for determining the resistance of the colour in textile fabrics to migration into polyvinyl chloride (PVC) which contains plasticizer.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 105. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 105 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 105-A01:1989, *Textiles — Tests for colour fastness — Part A01: General principles of testing.*

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

3 Principle

A specimen of a textile impregnated with plasticizer is brought into contact with a white pigmented polyvinyl chloride foil and kept under pressure at 80 °C. Then the specimen and excess plasticizer are removed from the foil and the staining of the foil is assessed with the grey scale.

4 Apparatus and reagents

4.1 *Testing device,* consisting of a frame of stainless steel into which a weight-piece of mass 5 kg and base 60 mm × 115 mm is closely fitted, so that a pressure of 12,5 kPa can be applied to test specimens measuring 40 mm × 100 mm placed between glass or acrylic resin plates. Up to 10 specimens can be tested simultaneously, each one separated by a glass plate. If the weight-piece is removed during the test, the testing device shall be so constructed that the pressure of 12,5 kPa remains unchanged.

NOTE 1 Other devices may be used, provided that the same results are obtained as with the apparatus described here.

4.2 *Oven,* maintained at 80 °C ± 2 °C.

4.3 *Graduated pipette* or *dropping tube*, with which the plasticizer can be applied.

4.4 *White pigmented polyvinyl chloride foil,* of thickness 0,5 mm ± 0,1 mm.

If ready-for-use white pigmented polyvinyl chloride foil cannot be obtained, it may be prepared as follows:

A mixture of

— 65 g of polyvinyl chloride powder,

— 2 g of stabilizer and

— 5 g of titanium dioxide

is thoroughly stirred with 35 g of dioctyl phthalate.

The homogenized paste is poured on to a glass plate to a thickness of 0,5 mm ± 0,1 mm and the paste left for 5 min at 170 °C to gel.

4.5 *Dioctyl phthalate.* Other plasticizers or mixtures of plasticizers can also be used.

4.6 *Petroleum ether* (boiling point below 80 °C).

4.7 *Grey scale for assessing staining,* complying with ISO 105-A03:1993.

5 Test specimen

5.1 Use a specimen of fabric measuring 40 mm × 100 mm.

5.2 Cut out a piece of the white pigmented polyvinyl chloride foil (**4.4**) measuring 40 mm × 100 mm.

6 Procedure

6.1 Clean the piece of white PVC foil by wiping with an undyed cloth impregnated with petroleum ether (**4.6**) and place it on the glass plate of the test apparatus (**4.1**). Then place the specimen on the foil with the side of the fabric to be tested facing the foil and apply uniformly drop by drop an amount of plasticizer (**4.5**) equal to the mass of the specimen. (In the case of heavy fabrics, care shall be taken that the plasticizer is distributed uniformly on the specimen.) Then cover the composite specimen with another glass plate and subject it to a pressure of 12,5 kPa in the test apparatus. If a weight is used, it shall be preheated to the test temperature.

If the dimensions of the composite specimen differ from 40 mm × 100 mm, use a weightpiece such that a pressure of 12,5 kPa is applied to the specimen.

6.2 Place the test apparatus containing the specimen in the oven (**4.2**) for 3,5 h at 80 °C ± 2 °C.

6.3 Remove the specimen from the PVC foil. Rinse the foil on the glass plate with petroleum ether and allow the latter to evaporate at room temperature.

CAUTION — Petroleum ether is flammable.

6.4 Immediately after drying, assess the staining of the polyvinyl chloride foil by means of the grey scale (**4.7**).

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7 Test report

The test report shall include the following particulars:

a) the number and date of publication of this part of ISO 105 (i.e. ISO 105-X10:1993);

b) all details necessary for the identification of the sample tested;

c) the type of plasticizer used;

d) the numerical rating for the staining of the white pigmented polyvinyl chloride foil.

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Annex ZA (normative)
Normative references to international publications with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

Publication	Year	Title	EN	Year
ISO 105-A01	1994	*Textiles — Tests for colour fastness — Part A01: General principles of testing*	EN ISO 105-A01	1994
ISO 105-A03	1993	*Textiles — Tests for colour fastness — Part A03: Grey scale for assessing staining*	EN 20105-A03	1994

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List of references

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