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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Textiles — Tests for colour fastness —

Part E12:

Colour fastness to milling: Alkaline milling

Textiles — Essais de solidité des teintures —

Partie E12: Solidité des teintures au foulon: Foulon alcalin

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-E12 was prepared by Technical Committee ISO/TC 38, *Textiles*.

This second edition cancels and replaces the first edition (included in ISO 105-E: 1978), 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 105-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.

Textiles — Tests for colour fastness —

Part E12:

Colour fastness to milling: Alkaline milling

1 Scope and field of application

This part of ISO 105 specifies a method for determining the resistance of the colour of wool and part wool textiles to the action of soap and sodium carbonate solution used in alkaline milling.

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 adjacent fabrics is milled in a jar containing steel balls and a solution of soap and sodium carbonate. The severity of the action is standardized by means of a test-control dyeing milled separately in the same way. The change in colour of the specimen and the staining of the adjacent fabrics are assessed with the grey scales.

4 Apparatus and reagent

4.1 Suitable mechanical device (see 8.1), consisting of a water bath containing a rotatable shaft which supports, radially, glass or stainless steel containers (75 ± 5 mm in diameter \times 125 ± 10 mm high) of approximately 550 ± 50 ml capacity, 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 solution at the prescribed temperature ± 2 °C.

4.2 Non-corrodible (stainless) steel balls, 0,6 cm diameter.

4.3 Two adjacent fabrics, each measuring 10 cm \times 4 cm, one piece made of the same kind of fibre as that of the textile to be tested, or that predominating in the case of blends, the second piece made of the fibre as indicated in the following table or, in the case of blends, of the kind of fibre second in order of predominance, or as otherwise specified.

If first piece is:	Second piece to be:
cotton	wool
wool	cotton
linen	wool
viscose	wool
acetate	wool
polyamide	wool
polyester	wool
acrylic	wool

4.4 Milling solution, containing 50 g of soap and 10 g of anhydrous sodium carbonate per litre. The soap should contain not more than 5 % moisture and comply with the following specifications based upon dry mass:

- free alkali, calculated as Na₂CO₃: 3 g/kg maximum
- free alkali, calculated as NaOH: 1 g/kg maximum
- total fatty matter: 850 g/kg minimum
- titre of mixed fatty acids prepared from the soap: 30 °C maximum
- iodine value: 50 maximum

The soap shall be free from fluorescent whitening agents.

4.5 Test control: a dyeing of CI Acid Blue 7 (Colour Index, 3rd Edition) on wool cloth (see 8.2).