Australian Standard®

Methods of test for textiles

Method 4.1: Colourfastness tests—Definitions and general requirements

PREFACE

This Standard was prepared by the Standards Australia Committee on Testing of Textiles as one of a series for determining the colourfastness of textiles. It supersedes AS 2001.4.1—1980.

This series of methods is largely based on the work of a technical committee of the International Standards Organization for Standardization (ISO/TC 38/SC 1) and is being adapted to suit Australian conditions.

Methods of test for determining the colourfastness of textiles to various treatments embody a number of common features. It is therefore convenient to group and present features including definitions, reagents, apparatus, samples, test specimens, procedures and other information in this Standard, which constitutes a basic reference for all colourfastness tests.

This edition of this Standard introduces the use of multifibre undyed cloths, but requires the use of the conventional undyed cloths of single fibre construction for referee assessments.

It also introduces the use of instrumental assessment techniques for evaluating colour change and staining.

METHOD

- 1 SCOPE This Standard sets out a basic reference for methods of test for determining the colourfastness of textiles to various treatments. It includes information in respect to definitions, reagents, apparatus, samples, test specimens and procedures common to many textile test methods.
- **2 OBJECTIVE** This Standard is intended to provide manufacturers and others seeking to determine the colourfastness of textiles to various treatments such as chemical, mechanical or naturally occurring treatments (e.g. sunlight), with a suitable method for obtaining that information.
- **3 REFERENCED DOCUMENTS** The following documents are referred to in this Standard.

AS

Sampling procedures and tables for inspection by attributes

2001 Methods of test for textiles 2001.1 Conditioning procedures

2001.4 Colourfastness

2001.4.15 Determination of colourfastness to washing

AS 2001.4.1— 1996

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ISO

- 105 Textiles—Tests for colour fastness
 - Part A02: Grey Scales for assessing change in colour
 - Part A03: Grey Scales for assessing staining
 - Part A04: Method for the instrumental assessment of the degree of staining of adjacent fabric
 - Part A05: Method for the instrumental assessment of the change in colour of a test specimen
 - Part B01: Colour fastness to light—Daylight
 - Part F Standard adjacent fabrics
 - Part F01: Specification for standard adjacent fabric: Wool
 - Part F02 Specification for standard adjacent fabric: Cotton and viscose
 - Part F03 Specification for standard adjacent fabric: Polyamide
 - Part F04 Specification for standard adjacent fabric: Polyester
 - Part F05 Specification for standard adjacent fabric: Acrylic
 - Part F06 Specification for standard adjacent fabric: Silk
 - Part F07 Specification for standard adjacent fabric: Secondary acetate
 - Part F08 Specification for standard adjacent fabric: Triacetate
 - Part F09 Specification for standard rubbing cloth: Cotton
 - Part F10 Specification for adjacent fabric: Multifibre
 - Part J03 Calculation of colour differences
- **4 DEFINITIONS** For the purpose of this Standard, the definitions below apply.
- **4.1** Blank test—a test to a treatment using undyed cloths, omitting the test specimen.
- **4.2 Colourfastness**—the resistance of textiles to colour change, and staining of undyed cloths, where applicable, to various treatments. Ratings are assigned to the change in colour of the test specimen and to the amount of staining of undyed cloth(s), as appropriate.
- **4.3** Composite specimen—the test specimen attached to one or two of the undyed cloths.
- **4.4 Test specimen**—the representative piece of the textile, usually taken from the sample, to be tested. If multicoloured textiles are to be tested, a sufficient number of test specimens are taken to ensure that all the colours are represented. Where possible, individual ratings are assigned to each colour.
- **4.5** Undyed cloths—cloths (adjacent fabrics) described in Appendix A, as required by this Standard for assessing staining.
- **5 PRINCIPLE** A test specimen of the textile, commonly in contact with undyed cloth(s) is exposed to a treatment that may affect the colour of the textile or cause staining of undyed cloth(s). The resultant change in colour of the test specimen and staining of undyed cloth(s) are assessed as appropriate.

6 REAGENTS

- **6.1 Chemicals** Chemicals shall be of analytical reagent quality unless otherwise specified.
- **6.2 Water** Distilled or deionized water shall be used in the preparation of test solutions. Water of hardness greater than 100 mg/L of CaCO₃ shall not be used.

7 APPARATUS

7.1 Conditioning facility Means of providing and maintaining a standard atmosphere as described in AS 2001.1, if required (see Clause 9.3).



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