STANDARDS ASSOCIATION OF AUSTRALIA

1988 ED.

Australian Standard
METHODS OF TEST FOR TEXTILES

PART 4—COLOURFASTNESS TESTS

AS 2001.4.5
DETERMINATION OF COLOURFASTNESS TO CHLORINATED, SWIMMING POOL WATER

PREFACE

This standard was prepared by the Association's Committee on Testing of Textiles as one of a series for determining the colourfastness of textiles to various agencies. It supersedes AS 1177, Part 5—1973.

This standard is significantly different to ISO 105, Series IV E03* in that the concentration of the reagent and the conditions of its application comply with Australian conditions. In particular, the test cycle is repeated until residual chlorine is present.

METHOD

1 SCOPE. This standard sets out a method for determining the colourfastness of textiles to chlorinated water. It is intended to give some guidance in respect of the colourfastness of textiles used in and around chlorinated swimming pools.

2 APPLICATION. This method applies to textiles in all forms exposed to chlorinated water containing up to 25 mg available chlorine per litre.

3 REFERENCED DOCUMENTS. The following standards are referenced to in this standard:

AS 2001	Methods of Test for Textiles
AS 2001.1	Conditioning Procedures†
AS 2001.4.1	Part 4—Colourfastness Tests—Definitions and General Requirements.

4 PRINCIPLE. A specimen of the textile is agitated in chlorinated water and dried. The change in colour of the specimen is assessed.

5 REAGENTS. The following reagents are required:

(a) A solution of distilled or deionized water containing the following:

(i) Sodium hypochlorite containing 25 mg available chlorine per litre.

NOTE: This concentration can be obtained by diluting, in two steps, a stock solution of sodium hypochlorite of known concentration as determined in accordance with Appendix A.

(ii) 9.45 g/L disodium hydrogen orthophosphate dodecahydrate ($Na_2HPO_4.12H_2O$).

(iii) 4.2 g/L sodium dihydrogen orthophosphate dihydrate ($NaH_2PO_4.2H_2O$).

(iv) 0.2 g/L of a non-ionic wetting agent. The wetting agent shall be a polyalkylene derivative of synthetic alcohol.‡

Adjust pH value to 7 ± 0.2 using 0.1 mol/L sodium hydroxide solution.

NOTE: The test solution is to be used within 12 h of preparation.

(b) Starch-iodide indicator paper.

6 APPARATUS. The following apparatus is required:

(a) Machine§ in which the containers holding the test specimen can be rotated end over end about 40 times per min in a constant temperature water bath. The capacity of the containers shall be about, but not less than, 500 mL.

(b) Grey Scale for assessing change in colour, as specified in AS 2001.4.1.

*Textiles—Tests for colour fastness—Colour fastness to chlorinated water (swimming-bath water)

†Revision of AS 1090 in course of preparation.

‡Teric BL8 produced by ICI Australia Ltd is a suitable wetting agent.

§A suitable machine can be obtained from either the Society of Dyers and Colourists, U.K. (Washwheel) or Atlas Electrical Devices Company, U.S.A. (LaunderOmeter).

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