STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 2001.2.10—1986
Methods of test for textiles
Part 2.10: Physical tests—Determination of the tear resistance of woven textile fabrics by the wing-rip method

RECONFIRMATION NOTICE

Technical Committee TX-020 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 6 July 2016.

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NOTES

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Australian Standard

METHODS OF TEST FOR TEXTILES

PART 2—PHYSICAL TESTS

AS 2001.2.10
DETERMINATION OF THE TEAR RESISTANCE OF WOVEN TEXTILE FABRICS BY THE WING-RIP METHOD

PREFACE

This edition of this standard was prepared by the Association's Committee on Testing of Textiles. It supersedes AS 1091—1973.

It is one of a series of methods which takes cognizance of the work of the International Organization for Standardization (ISO/TC 38, Textiles) and is being adapted to suit Australian conditions.

METHOD

1 SCOPE. This standard sets out a procedure for determining the tear resistance of woven textile fabrics by the wing-rip method. Two test interpretations are involved—

(a) mean of the highest peak forces;

(b) tearing energy.

2 APPLICATION. This method is applicable to woven fabrics provided that the yarns in the fabric do not withdraw from the specimen during the test.

3 REFERENCED DOCUMENT. The following standards are referred to in this standard:

AS 2001.1 Methods of Test for Textiles—Conditioning Procedures.

AS 2193 Methods for Calibration and Grading of Force—Measuring Systems of Testing Machines.

4 DEFINITIONS. For the purpose of this standard the following definitions apply:

4.1 Warp tests—tests in which the warp yarns are torn.

4.2 Weft tests—tests in which the weft yarns are torn.

4.3 Tearing energy—the work done in tearing the specimen for a constant jaw separation.

5 PRINCIPLE. A test specimen is cut part way along its length so as to form two wings. The wings are gripped in the jaws of a testing machine. The force required to propagate the tear is measured.

6 APPARATUS. The following apparatus is required: A testing machine complying with the following requirements:

(a) The machine shall comply with the requirements of Grade B machines as specified in AS 2193, except that the error in the measurement of length shall not exceed 1.0 mm.

(b) The machine shall be equipped with an autographic recorder for measuring a force-extension diagram.

(c) The capacity of the machine or the range selected shall be such that the force required to break the test specimens shall be not less than 10 percent of the machine capacity.

(d) The machine shall be capable of extending the specimen at a constant rate.

(e) The force measuring mechanism of the machine shall allow little or no movement of the fixed jaws in the direction of the applied force.

(f) The fixed and moving jaws of the machine shall be in the same plane, parallel to one another and at right angles to the direction of application of the force.

(g) The jaws of the machine shall be constructed so that they do not damage the test specimen.

NOTE: Suitable packing materials or embedding techniques may be used whenever necessary to prevent test specimens slipping in the jaws.

(h) The jaws of the machine shall be not less that 75 mm in width.

(j) If tearing energy is required to be determined, an integrator shall be provided.

7 TEST SAMPLE AND TEST SPECIMEN.

7.1 Selection. The test sample shall be representative of the piece under test and shall be 1 m in length and preferably full width.