

Australian/New Zealand Standard®

Textile floor coverings—Tests and measurements

Method 7: Determination of loop length of pile

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TX/9 on Carpets. It is based on and is equivalent to the method of the same title in BS 4223:1989, *Method for determination of constructional details of textile floor coverings with yarn pile*. In Australia, the Standard supersedes AS 2111.7—1978 *Methods of test for textile floor coverings, Method 7: Determination of loop length of pile of textile floor coverings*.

METHOD

1 SCOPE This Standard describes two procedures for determining the loop length of the pile yarn in textile floor coverings.

2 APPLICATION The method is applicable to all forms of textile floor coverings having a loop pile except those made from bulk or stretched yarn.

3 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

2001 Methods of test for textiles

2001.1 Method 1: Conditioning procedures

2119 Methods for sampling and cutting specimens of textile floor coverings for testing

2454 Textile floor coverings—Terminology

4 DEFINITIONS For the purpose of this Standard, the definitions given in AS 2454 and that below apply.

4.1 Loop length—the length of yarn forming one complete loop, including the portion held in the backing.

5 PRINCIPLE A length of yarn containing several loops is extracted from the textile floor covering and measured when straightened, but not stretched.

6 APPARATUS The following apparatus is required:

- (a) *Suitable apparatus for measuring a length of yarn to an accuracy of 1 mm when straightened but not stretched* This may be done by hand using two pairs of forceps to hold the yarn against a scale. Alternatively, the length may be measured under a tension of 0.75 N, e.g. in a yarn crimp tester.

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- (b) *Conditioning apparatus* Means for producing and maintaining the standard atmosphere as specified in AS 2001.1.

7 SAMPLES AND TEST SPECIMENS

7.1 Sampling The sample and test specimens shall be selected in accordance with the requirements of AS 2119.

7.2 Preparation and number of test specimens Test specimens shall be prepared as follows:

- (a) The samples shall be conditioned in the standard atmosphere as specified in AS 2001.1 by laying them out flat and singly with the use surface uppermost. Condition them for a minimum of 24 h or until they reach moisture equilibrium. Preconditioning is not required.

For the purpose of this Standard, moisture equilibrium is considered to have been reached when successive weighings at 2 hourly intervals show no progressive change in mass greater than 0.25 percent.

The test shall be conducted in the standard atmosphere as specified in AS 2001.1.

- (b) From the different positions in the length and width of the sample of textile floor covering, remove not less than five lengths of pile yarn, each containing 20 successive loops, cutting the yarn at the top of one loop and again at the top of the twentieth loop further on.
- (c) If the textile floor covering contains loops of different length, remove at least five lengths of each type. If 20 successive loops of the same length cannot be obtained, use as many as are obtainable.

8 PROCEDURE

8.1 Test A Each end of the yarn specimen shall be gripped with forceps and straightened, but not stretched, against the graduated scale with one end against a datum or zero mark. The length shall be recorded as read from the position of the other end of the yarn, to the nearest 1 mm. At least five specimens shall be measured.

8.2 Test B Each end of the yarn specimen shall be inserted in the grips of the crimp tester up to datum marks. The tension control shall be adjusted to 0.75 N and the ends moved apart until this tension is realized. The distance between the datum marks shall be recorded, to the nearest 1 mm. At least five specimens shall be measured.

9 CALCULATION AND EXPRESSION OF RESULTS The mean measured length shall be calculated to the nearest 1 mm. The mean loop length shall be calculated by dividing the mean measured length by 20 (or the actual number of loops if 20 are not obtainable). If the textile floor covering contains loops of different lengths the mean of each type shall be calculated separately.

10 REPORT The following information shall be reported:

- (a) The number of yarn specimens measured, the number of loops in each and the mean loop length to the nearest 0.1 mm.
- (b) If the textile floor covering has loops of different length, the mean length of each type and the number of each type tested.
- (c) A statement that the test was conducted in accordance with this Joint Australian/New Zealand Standard, and details of any operations not included in this Standard or regarded as optional.
- (d) Reference to this Australian/New Zealand Standard, i.e. AS/NZS 2111.7, stating whether Test A or Test B.