

BRITISH STANDARD

Textiles – Method for determination of propensity of fabrics to snagging – Rotating chamber method

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Foreword

Publishing information

This British Standard is published by BSI and came into effect on 30 November 2008. It was prepared by Technical Committee TCI/24, *Physical testing of textiles*. A list of organizations represented on this committee can be obtained on request to its secretary.

Information about this document

This standard gives a method of test which uses a rotating chamber containing snagging pins to measure the propensity of fabric test samples to snagging. Another procedure for this test which uses external snagging pins attached to a “mace” is under development. It is envisaged that this procedure will be added to the standard in a future revision.

Use of this document

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its methods are expressed as a set of instructions, a description, or in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

Introduction

Snagging is a phenomenon in which undesirable loops of varying sizes appear on the surface of a garment, usually as a result of the fabric catching on sharp points or objects. Fabrics made of filament yarns, both textured and untextured, are most prone to snagging. However, certain fabrics made of spun staple yarns, and certain fabric structures e.g. satin and sateens, can also be prone to snagging. It is important to be able to measure the propensity of fabrics to snagging so that fabrics with the lowest propensity to snagging can be selected for making garments.

1 Scope

This British Standard gives a method for determining the propensity of fabrics to snagging, and related surface defects. The standard is applicable to knitted and to woven fabrics.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 3870-1, *Stitches and seams – Part 1: Classification and terminology of stitch types*

BS EN ISO 139, *Textiles – Standard atmospheres for conditioning and testing*

BS EN ISO 12947-1, *Textiles – Determination of the abrasion resistance of fabrics by the Martindale method – Part 1: Martindale abrasion testing apparatus*

3 Terms and definitions

For the purposes of this British Standard the following terms and definitions apply.

3.1 snag

undesirable loop on the surface of a woven or knitted fabric

NOTE Snags can be of various sizes and are usually the result of the fabric catching on sharp points or objects.

3.2 protrusion

partially formed snag

3.3 filamentation

fibrous or hairy appearance on the surface of a fabric due to broken yarn filaments

3.4 pulled thread

thread in a fabric that is tighter than the threads adjacent to it

3.5 shiner

thread that is more lustrous (and generally tighter) than the threads adjacent to it

NOTE Shiners most commonly occur in fabrics made of continuous filament yarn. They often occur as a result of snagging, as this causes the yarn to be pulled.

3.6 indentation

concave distortion of the surface of a fabric

4 Principle

Specimens of the fabric under test are mounted on felt-covered polyurethane tubes and tumbled randomly in a test chamber rotating at a constant speed, the inside of which is fitted with rows of pointed pins. The specimens are then examined for the presence of snags and other surface defects.

5 Apparatus

5.1 Test chamber, the inner surface of which has a regular octagonal cross-section, closed at one end and with an openable flap at the other (see Note), as illustrated in Figure 1, with an internal diameter between opposite parallel faces of (224.5 ± 0.3) mm and a depth of (228.0 ± 0.1) mm.

NOTE The opening should be sufficiently large to permit access to the inside of the chamber for cleaning.

The inner surface shall be made of a non-absorbent material, such as stainless steel or polypropylene, that is known to be resistant to degradation by generally available cleaning materials. It shall not have any surface finish, such as paint or varnish, that might be abraded during the tests.

The inner surface, including both ends, shall be smooth and free from defects.

The chamber shall be fitted with, or to, a device which is able to rotate the chamber about its horizontal axis at a constant speed of (60 ± 2) r/min.

The chamber shall be fitted with four lines of inward pointing pins made of metal with a minimum hardness value of 58 Rockwell (C scale). Each pin shall have a nominal diameter of (1.0 ± 0.1) mm. The top (1.5 ± 0.1) mm of each pin shall be tapered to a sharp point. The point shall be free from hooks and burrs. Pins with rounded ends shall not be used. The lines of pins shall run parallel to the long axis of the chamber and shall be evenly spaced round the inner circumference of the chamber. The pins shall either be fitted to a series of bars which are recessed into the chamber wall, or be fixed directly into the chamber wall. The holes into which the pins are secured shall be blind so that the pins cannot be forced down into the bar or the chamber wall during the test, thus altering their height.