
International Standard



7211/4

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Textiles — Woven fabrics — Construction — Methods of analysis — Part 4: Determination of twist in yarn removed from fabric

Textiles — Tissus — Construction — Méthodes d'analyse — Partie 4: Détermination de la torsion d'un fil prélevé dans un tissu

First edition — 1984-03-15

UDC 677.064 : 677.014.885

Ref. No. ISO 7211/4-1984 (E)

Descriptors : textiles, woven fabrics, tests, determination, twisting, yarns, test specimens, test equipment, test results.

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 7211/4 was developed by Technical Committee ISO/TC 38, *Textiles*, and was circulated to the member bodies in November 1982.

It has been approved by the member bodies of the following countries:

Australia	Iran	Romania
Belgium	Iraq	South Africa, Rep. of
Brazil	Israel	Spain
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China	Jamaica	Tanzania
Czechoslovakia	Japan	Thailand
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Finland	Mexico	United Kingdom
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The member bodies of the following countries expressed disapproval of the document on technical grounds:

Canada
France

Textiles — Woven fabrics — Construction — Methods of analysis —

Part 4: Determination of twist in yarn removed from fabric

0 Introduction

Although the twist in a yarn removed from a fabric is determined on the same apparatus as is used for determining the twist in yarn withdrawn from a package (see ISO 2061), there are some differences of technique. In particular, care must be taken to avoid alteration of twist during transfer of the yarn from the fabric to the apparatus.

A standard mounting tension is also required to remove the crimp which is present in most yarns as a result of incorporation in fabrics.

Alterations in twist may occur when a yarn is incorporated into or removed from a more complex structure. To determine the twist in the single yarns from a sample of the folded yarn, however, it is essential to untwist the latter, thus re-inserting twist in the single yarns. The results of twist tests on these single yarns will, therefore, indicate the state of the yarn prior to the folding operation and not when it is functioning as a component of the folded yarn.

1 Scope and field of application

This part of ISO 7211 specifies a method for the determination of twist in yarns removed from woven fabrics. The method is only applicable to yarns spun on conventional systems, and is not applicable to OE (open-end spun) or interlaced yarns, for example.

2 References

ISO 2, *Textiles — Designation of the direction of twist in yarns and related products.*

ISO 139, *Textiles — Standard atmospheres for conditioning and testing.*

ISO 2061, *Textiles — Determination of twist in yarns — Direct counting method.*

ISO 7211/3, *Textiles — Woven fabrics — Construction — Methods of analysis — Part 3: Determination of crimp of yarn in fabric.*

3 Principle

A length of yarn is removed from the fabric and, while under tension, is secured in two clamps which are at a known distance apart. One of these clamps is then rotated until all twist is removed from the length of yarn.

4 Apparatus

4.1 Twist counter, consisting of a pair of clamps, one of which shall be rotatable in either direction and positively connected to a revolution counter. The clamps shall be adjustable to permit testing yarn lengths as specified in the table. For certain folded, cabled and similar yarns, it may be convenient to make provision for displacement of the non-rotatable clamp to allow for change in length of the test specimen during untwisting. Means shall be provided for applying the appropriate straightening tension (see ISO 7211/3) prior to clamping.

4.2 Dissecting needle.

4.3 Means for magnifying the specimen being tested.

5 Conditioning and testing atmosphere

One of the atmospheres for conditioning and testing textiles as defined in ISO 139 shall be used for conditioning and testing.

6 Test specimens

Expose the piece or pieces of fabric from which specimens are to be removed to the standard atmosphere for testing for at least 16 h.

Remove single threads from strips of fabric each containing more threads than will be withdrawn for testing and at least 7 cm to 8 cm longer than the test length cut as follows.

The warp threads in a woven fabric are from many different packages and the warp is thus already sampled for testing.