
Reinforcement yarns — Determination of twist balance index

Fils de renfort — Détermination de l'indice d'équilibre en torsion

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 3343:2010

<https://standards.iteh.ai/catalog/standards/sist/624e7d23-ccd2-4be2-8a63-68f7670af4a6/iso-3343-2010>



Reference number
ISO 3343:2010(E)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 3343:2010

<https://standards.iteh.ai/catalog/standards/sist/624e7d23-ccd2-4be2-8a63-68f7670af4a6/iso-3343-2010>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2010

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 3343 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 13, *Composites and reinforcement fibres*.

This third edition cancels and replaces the second edition (ISO 3343:1984), of which it constitutes a minor revision. The following changes have been made:

- a) the scope has been broadened to include all reinforcement yarns;
- b) the sampling clause has been deleted (the sampling standard, ISO 1886, referred to in the previous edition has been withdrawn without replacement);
- c) a clause concerning conditioning and the test atmosphere has been added.

iTeh STANDARD PREVIEW **(standards.iteh.ai)**

ISO 3343:2010

<https://standards.iteh.ai/catalog/standards/sist/624e7d23-eed2-4be2-8a63-68f7670af4a6/iso-3343-2010>

Reinforcement yarns — Determination of twist balance index

1 Scope

This International Standard specifies a method for determining the twist balance index of folded yarn and cabled yarn made from textile glass, carbon, aramid or any other reinforcement fibre.

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.

ISO 291, *Plastics — Standard atmospheres for conditioning and testing*

3 Principle

iTeh STANDARD PREVIEW
(standards.iteh.ai)

A yarn is arranged in an open loop of specified length and width and the number of turns the yarn makes on itself is counted.

[ISO 3343:2010](https://standards.iteh.ai/catalog/standards/sist/624e7d23-ccd2-4be2-8a63-68f7670af4a6/iso-3343-2010)

<https://standards.iteh.ai/catalog/standards/sist/624e7d23-ccd2-4be2-8a63-68f7670af4a6/iso-3343-2010>

4 Test specimens

The determination is carried out on five specimens taken consecutively from an elementary unit¹⁾ or laboratory sample²⁾.

5 Conditioning and test atmosphere

No conditioning is required. However, in cases of dispute, the determination shall be carried out in one of the standard atmospheres defined in ISO 291.

1) The elementary unit is the smallest normally commercially available entity of a given product.

2) A laboratory sample is a part of the elementary unit from which the specimen(s) will be selected for the test. A laboratory sample is taken when it is impractical to bring the elementary unit into the test laboratory.

6 Procedure

6.1 Unwind tangentially the first 50 m of yarn from a package in order to obtain a representative test specimen from this package. Pinch the yarn between thumb and forefinger; do not cut the yarn.

6.2 Further unwind tangentially an additional 1 m of yarn, which constitutes the first test specimen. As described in 6.1, pinch the yarn without cutting it. Let the yarn hang to form an open loop, with the two ends of the specimen held 100 mm apart.

6.3 Note the number of turns, N_i , the yarn makes on itself, and the direction (S or Z) in which the loop twists. The counting may be done while untwisting the yarn.

6.4 Repeat the operation described in 6.2 five times, with the specimens immediately succeeding each other and taking care to take the yarn near the package in order to avoid any loss of twist. Note the result as described in 6.3.

7 Expression of results

The twist balance index, E_i , of the yarn is represented by the number of turns, N_i , the yarn makes on itself:

$$E_i = N_i$$

The result of the determination of the twist balance index is the arithmetic mean of the values obtained for the five specimens tested, rounded to the first decimal place.

8 Test report

The test report shall include the following information:

- a) a reference to this International Standard;
- b) all details necessary for complete identification of the sample tested;
- c) the method used to unwind the yarn;
- d) the result of the determination (twist balance index and direction of the twist in the loop) and, if required, the result for each specimen;
- e) details of any operations not specified in this International Standard, as well as details of any incidents which might have affected the results;
- f) the date of the test.

iTeh STANDARD PREVIEW **(standards.iteh.ai)**

ISO 3343:2010

<https://standards.iteh.ai/catalog/standards/sist/624e7d23-eed2-4be2-8a63-68f7670af4a6/iso-3343-2010>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 3343:2010

<https://standards.iteh.ai/catalog/standards/sist/624e7d23-eed2-4be2-8a63-68f7670af4a6/iso-3343-2010>