ICS 59.080.40 SLOVENSKÁ TECHNICKÁ NORMA Máj 2023

STN	**Textílie povrstvené gumou alebo plastmi Zisťovanie pevnosti v ďalšom trhaní Časť 3: Lichobežníková metóda (výpočet piatich najvyšších píkov)**	**STN EN 1875-3** 80 0911

Rubber- or plastics-coated fabrics - Determination of tear strength - Part 3: Trapezoidal method (five-highest-peak calculation)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/23

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English Version

Rubber- or plastics-coated fabrics - Determination of tear strength - Part 3: Trapezoidal method (five-highest-peak calculation)

Supports textiles revêtus de caoutchouc ou de plastique - Détermination de la résistance au déchirement - Partie 3 : Méthode sur éprouvettes trapézoïdales (calcul des cinq pics les plus hauts)

Mit Kautschuk oder Kunststoff beschichtete Textilien - Bestimmung der Weiterreißfestigkeit - Teil 3: Verfahren mit trapezförmigen Probekörpern (Berechnung der fünf höchsten Scheitelwerte)

This European Standard was approved by CEN on 25 December 2022.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 1875-3:2023) has been prepared by Technical Committee CEN/TC 248 “Textiles and textile products”, the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2023, and conflicting national standards shall be withdrawn at the latest by August 2023.

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

This document supersedes EN 1875-3:1997.

In comparison with the previous edition, the main technical changes are as follows:

— in the title: addition of the mention of the five-highest-peak calculation;

— in Clause 2: substitution of EN 22286 (and correction) by EN ISO 2286-1 and EN ISO 2286-3;

— in Clause 3: addition of term and definition of “tear force” (3.4);

— in Clause 5: addition of clamping system; specification of the minimum width of the jaws (5.2);

— in 6.1: clarification of atmosphere for conditioning and testing; specification of the duration of conditioning for textiles coated on one and both sides;

— gathering of former 6.3, 6.4 and 6.5 to one sub-clause (new 6.3) called “Selection and preparation of test pieces”;

— in 6.5, supplement description of the preparation on coated woven substrates;

— in Clause 7: addition of further requirements (for example, no slippage, tear propagation) on testing;

— in Clause 8: the calculation (expression of results) has been changed to be based on the entire trace;

— addition of Figure A.1 – test specimen.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

Tearing is amongst the more usual ways of destruction for many thin and flexible materials. Knowledge of the resistance of these materials to this type of behaviour is therefore very important. In practice, tearing can result from very different circumstances: hence the large number of test methods that have been developed in order to predict the behaviour of the materials in various situations.

This document forms part of a European Standard on tear resistance of coated fabrics as follows

- EN ISO 4674-1, *Rubber- or plastics-coated fabrics - Determination of tear resistance - Part 1: Constant rate of tear methods (ISO 4674-1);*
- EN ISO 4674-2, *Rubber- or plastics-coated fabrics - Determination of tear resistance- Part 2: Ballistic pendulum method (ISO 4674-2);*
- EN 1875-3, *Rubber- or plastics-coated fabrics - Determination of tear strength - Part 3: Trapezoidal method (five-highest-peak calculation).*

The first part describes two methods using a tensile testing machine at a constant rate of elongation. The second part describes a dynamic method using the kinetic energy of a falling pendulum. For these two parts, tearing propagates in a direction parallel to the applied force. The third part uses a trapezoidal test piece, where tearing propagates in a direction perpendicular to the applied force.

Trapezoidal method should logically be classified with the constant speed methods but is generally considered apart owing to the direction of propagation.

Attention is drawn to the fact that the results of the different methods cannot be compared, owing to the differences of principle.

1 Scope

This document specifies test conditions and the procedure to be followed for determining the tear strength of a trapezoidal specimen of a rubber- or plastics-coated fabric, using a tensile testing machine. This test can be carried out:

- either on test specimens conditioned in reference atmospheres; or
- on test specimens which have been subjected to any necessary treatment for the application considered, for example dipping.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN ISO 1421, *Rubber- or plastics-coated fabrics - Determination of tensile strength and elongation at break (ISO 1421)*

EN ISO 2231, *Rubber- or plastics-coated fabrics - Standard atmospheres for conditioning and testing (ISO 2231)*

EN ISO 2286-1, *Rubber- or plastics-coated fabrics - Determination of roll characteristics - Part 1: Methods for determination of length, width and net mass (ISO 2286-1)*

EN ISO 7500-1, *Metallic materials - Calibration and verification of static uniaxial testing machines - Part 1: Tension/compression testing machines - Calibration and verification of the force-measuring system (ISO 7500-1)*