

Surfaces for sports areas — Determination of resistance to abrasion of non-filled synthetic turf

The European Standard EN 13672:2004 has the status of a
British Standard

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National foreword

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 5 and a back cover.

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ICS

English version

**Surfaces for sports areas - Determination of resistance to
abrasion of non-filled synthetic turf**

Sols sportifs - Détermination de la résistance à l'abrasion
des gazons synthétiques non chargés

Sportböden - Bestimmung des Verschleißverhaltens von
ungefülltem Kunststoffrasen

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Foreword

This document (EN 13672:2004) has been prepared by Technical Committee CEN/TC 217 "Surfaces for sports areas", 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of an identical text or by endorsement, at the latest by February 2005, and conflicting national standards shall be withdrawn at the latest by February 2005.

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1 Scope

This document describes a method for the determination of the wear resistance of a non-filled synthetic turf surface using an abrasive wheel under laboratory conditions. It is applicable to non-filled synthetic turf with a pile height greater than 15 mm.

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.

EN ISO 5470-1, *Rubber- or plastics-coated fabrics — Determination of abrasion resistance – Taber abrader (ISO 5470-1:1999)*.

3 Terms and definitions

For the purposes of this document, the following term and definition applies.

3.1

wear resistance

loss of mass from the pile of synthetic turf

4 Principle

A test piece is abraded by the action of a pair of abrasive wheels on a rotating test piece. The resulting loss in mass is determined.

5 Apparatus

5.1 *Abrasion apparatus*, as specified in EN ISO 5470-1.

5.2 *Freshly re-faced abrasive wheels H18*, acting under a load of 1 000 g per wheel.

5.3 *Re-facing disc S11*.

5.4 *Balance*, capable of weighing to an accuracy of $\pm 0,001$ g.

6 Sampling and preparation of test pieces

Take four test pieces with edge length of 100 mm across the sample, not closer than 200 mm to the edge of the sample. Remove any loose particles from the test pieces.

7 Conditioning

Condition the test pieces for a minimum of 3 h at the test temperature. If the material is known to be sensitive to humidity, condition for a minimum of 48 h at standard temperature and relative humidity.

Unless otherwise specified, the standard temperature shall be (23 ± 2) °C and the standard relative humidity shall be (50 ± 5) %.

8 Procedure

8.1 Weigh the test piece to an accuracy of 0,001 g.

8.2 Before each test, re-face the abrasive wheels using re-facing disc S11.

8.3 Position the test piece in the abrasion apparatus (5.1). Lower the loaded abrasive wheels onto the surface of the test piece and start the machine. After 2 000 revolutions stop the machine. Remove the test piece from the machine. Remove any loose debris from the test piece by vacuuming. Re-weigh the test piece. Re-face the abrasive wheels with re-facing disc .

Repeat this procedure after further 3 000 revolutions so that the test piece is subjected to a total of 5 000 revolutions.

8.4 Repeat the procedure on the other three test pieces.

9 Calculation and expression of results

Record the mass loss after 2 000 and 5 000 revolutions for each test piece. Calculate the arithmetic mean of the mass loss for the four test pieces after 2 000 and 5 000 revolutions.

Express the results in absolute figures to the nearest of 0,01 g and as the percentage mass loss to the nearest of 0,01 %.

10 Test report

The test report shall include the following information:

- a) reference to this document, i.e. EN 13672:2004;
- b) complete identification of the product tested, including type, source, colour, manufacturer's reference and previous history;
- c) method of sampling;
- d) test temperature and relative humidity, if required;
- e) arithmetic mean of the mass loss after 2 000 and 5 000 revolutions, expressed in grams and as a percentage.

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