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Australian Standard™

Surfaces for sports areas—Methods of test

Method 5: Determination of water infiltration rate

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PREFACE

This Standard was prepared by Standards Australia Committee PL-048, Sporting Surfaces.

This Standard is identical with and has been reproduced from EN 12616:2003, *Surfaces for sports areas—Determination of water infiltration rate.*

The objective of this Standard is to specify three methods for the determination of water infiltration rate. *Method A* is suitable for synthetic, textile, synthetic turf and bound mineral sports surfaces, *Method B* is suitable for natural turf, and *Method C* is suitable for unbound mineral sports surfaces.

As this Standard is reproduced from a European Standard, the following applies:

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text 'this European Standard' should read 'this Australian Standard'.

(c) A full point substitutes for a comma when referring to a decimal marker

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METHOD

1 Scope

This European Standard specifies three methods for the determination of water infiltration rate. Method A is suitable for synthetic, textile, synthetic turf and bound mineral sports surfaces, Method B is suitable for natural turf and Method C is suitable for unbound mineral sports surfaces.

NOTE For unbound mineral surfaces, laboratory tests are considered to give a more precise indication of how a surface will perform.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 12229, *Surfaces for sports areas — Procedure for the preparation of synthetic turf and textile test pieces.*

3 Principle

Water is ponded within two concentric cylinders that have been sealed onto or hammered into the sports surface. The outer cylinder is used as a buffer area to prevent the lateral flow of water from the inner cylinder.

NOTE A single cylinder can be used if the test piece is fully sealed to prevent lateral flow of water.

The rate of entry into the sports surface from the inner cylinder is measured.

4 Apparatus

4.1 Infiltrometer, with dimensions specified in 4.1.1, 4.1.2 and 4.1.3, consisting of one or two metal cylinders (see Figure 1) capable of being sealed onto, or hammered perpendicularly into, the sports surface, as appropriate (see Figure 2).

4.1.1 Large cylinder, double-ring infiltrometer, for tests on surfaces with a rate of water infiltration less than 500 mm/h, consisting of an inner cylinder of inner diameter (300 ± 5) mm forming the measurement area and an outer cylinder of inner diameter (500 ± 25) mm forming the buffer area to prevent the lateral flow of water from the inner cylinder.

NOTE A wide tolerance on the cylinder diameter is permitted to allow the cylinders to be stacked for ease of transport.

4.1.2 Small cylinder, double-ring infiltrometer, for tests on surfaces with a rate of water infiltration greater than 500 mm/h and where the available water supply is limited, consisting of an inner cylinder of inner diameter (150 ± 5) mm and an outer cylinder of diameter (300 ± 25) mm.

4.1.3 Single ring infiltrometer, in cases where the test piece can be fully sealed to prevent lateral flow of water, e.g. when measuring the rate of water infiltration in the laboratory, consisting of a single cylinder of dimensions conforming to the inner cylinder dimensions of 4.1.1 or 4.1.2.