

Australian Standard™

AS 4693.3—2004

Surfaces for sports areas—Methods of test**Method 3: Determination of joint strength of synthetic surfaces**

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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 12228:2002, *Surfaces for sports areas—Determination of joint strength of synthetic surfaces*.

The objective of this Standard is to specify two test methods for determination of joint strength of synthetic sports surfaces including synthetic turf.

Method 1 describes a procedure for butt joints and overlapped adhesive joints in which a direct force is applied.

Method 2 describes a procedure for reinforced butt joints in which a peel force is applied.

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- (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’.

A full point substitutes for a comma when referring to a decimal marker.

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METHOD

1 Scope

This European Standard specifies two test methods for determination of joint strength of synthetic sports surfaces including synthetic turf. Method 1 describes a procedure for butt joints and overlapped adhesive joints in which a direct force is applied. Method 2 describes a procedure for reinforced butt joints in which a peel force is applied.

2 Normative reference

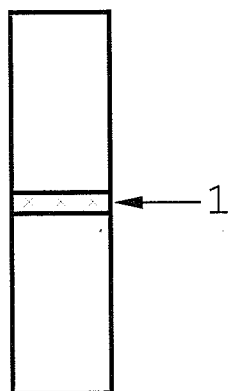
This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications 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 ISO 7500-1, *Metallic materials - Verification of static uniaxial testing machines - Part 1: Tension/compression testing machines (ISO 7500-1:1999)*.

3 Method 1 — Direct tension method

3.1 General

This method is suitable for testing all types of synthetic sports surfaces that incorporate chemically or mechanically bonded butt joints including sewn and welded joints as the manner of joining adjacent lengths of synthetic sports surfacing (see Figure 1).



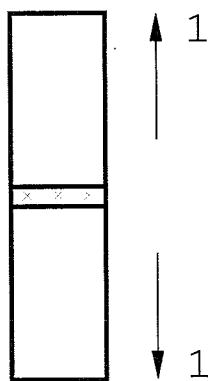
Key

1 Chemical/mechanical joint (including sewn seams)

Figure 1 — Butt joint

3.2 Principle

An increasing tensile force is applied perpendicular to the joint until it breaks and the maximum force applied is recorded (see Figure 2).



Key

1 Tensile force

Figure 2 — Principle of test — Direct tension method

3.3 Apparatus

3.3.1 Tensile testing machine, conforming to class 1 of EN ISO 7500-1:1999.

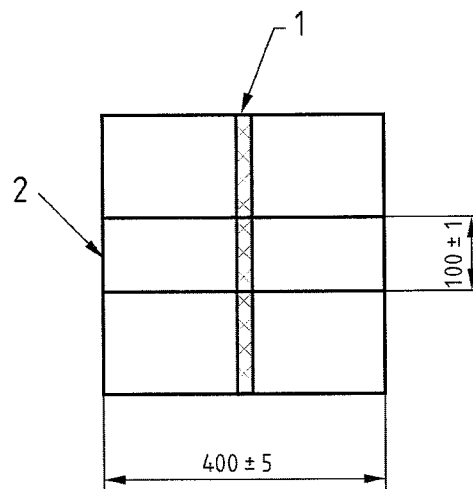
3.3.2 Jaws, which are sufficiently wide to hold the entire width of the test piece and with appropriate means to avoid slippage or damage.

3.4 Test piece

3.4.1 Stitched or welded joint

Cut from a sample of surface five test pieces of length (400 ± 5) mm and width (100 ± 1) mm with the joint centrally located (200 mm) across each test piece (see Figure 3).

Dimensions in millimetres



Key

1 Joint

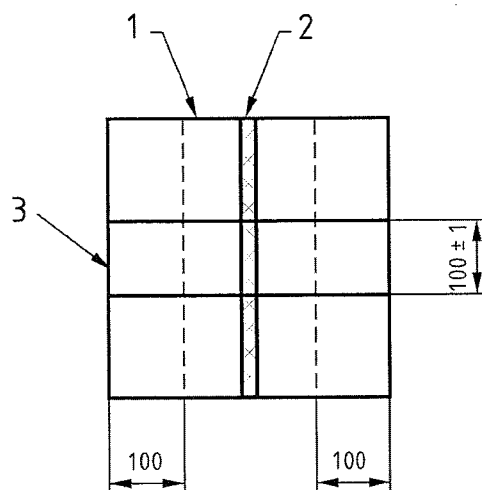
Figure 3 — Test piece layout stitched or welded joint

For any test piece containing a stitched joint, the stitching shall be tied off at the edge of the joint to prevent running.

3.4.2 Stitched or welded joints incorporating jointing tape

Cut from a sample of surface five test pieces, the length of which shall be the width of the backing material plus 100 mm each side of the backing material and width (100 ± 1) mm (see Figure 4).

Dimensions in millimetres



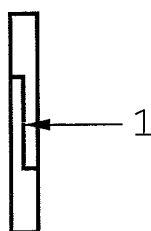
Key

- 1 Backing material
- 2 Joint
- 3 Test piece

Figure 4 — Test piece layout for stitched or welded joint incorporating jointing tape

3.4.3 Overlapped adhesive joints

Cut from a sample of surface five test pieces, the length of which shall be the width of the overlapped joint plus 100 mm each side of the joint and width (100 ± 1) mm (see Figures 5 and 6).



Key

- 1 Adhesive

Figure 5 — Overlapped adhesive joint