BS ISO 16906:2015

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Resilient floor coverings — Determination of seam strength

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee PRI/60, Resilient and Laminate Floor Coverings.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Resilient floor coverings — Determination of seam strength

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Foreword

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The committee responsible for this document is ISO/TC 219, *Floor coverings*.

Resilient floor coverings — Determination of seam strength

1 Scope

This International Standard specifies a method for determining the strength of the seams of resilient floor coverings when welded in accordance with the manufacturer's instructions.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1
seam strength
maximum tensile force recorded, for a defined width, when a floor covering is tested under a constant rate of extension

2.2
constant-rate-of-extension (CRE) testing machine
tensile testing machine provided with one clamp which is stationary and another clamp which moves with a constant speed throughout the test, the entire testing system being virtually free from deflection

3 Principle

An increasing tensile force is applied until the seam breaks (see Figure 1; the arrows indicate the direction of the applied tensile forces).

Figure 1 — Principle of test

4 Apparatus

A tensile testing machine, which allows a speed of separation of (100 ± 5) mm/min, and a force recording device shall be used.

5 Sampling and preparation of test pieces

5.1 Sampling

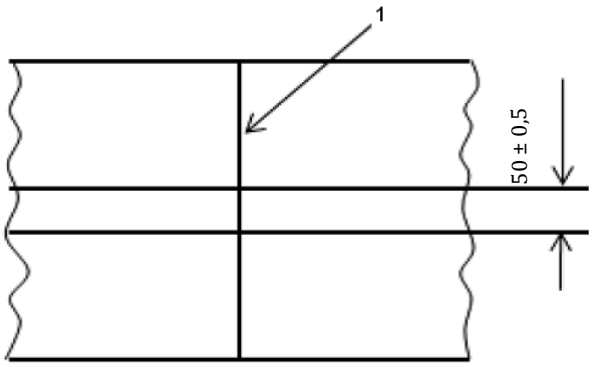
Take a representative sample from the available material.

5.2 Preparation of test pieces

Take two pieces of a sheet floor covering with minimum length of 1 m and minimum width of 300 mm and weld them together in accordance with the manufacturer's instructions. The weld shall be done on the long side of the sample. For tiles, weld two tiles together in accordance with the manufacturer's instructions.

Cut five test pieces with minimum length of 150 mm and width of (50 ± 0,5) mm at equal distances across the sample, the distance between the outer edge of the sample and the nearest edge of the test piece being at least 100 mm, with the seam centrally located across each test piece (see Figure 2).

Dimensions in millimetres



Key

1 seam

Figure 2 — Test piece layout

6 Conditioning

Condition the test pieces at a temperature of (23 ± 2) °C and relative humidity of (50 ± 5) % for a minimum of 24 h.

Maintain these conditions when carrying out the test.

7 Procedure

Place the test piece in the jaws (which are approximately 100 mm apart) of the tensile testing machine so that the seam is at an equal distance from the jaws and tension is applied evenly over the width. Set the machine and its recording device in operation such that the speed of separation is (100 ± 5) mm/min. Record the force at break or the maximum force exerted.

Repeat the test on the remaining test pieces to obtain five values.

8 Calculation an expression of results

Calculate the mean value of the five tests and express the result to the nearest 10 N in N/mm.

Also record the minimum of the individual values.

9 Test report

The test report shall contain the following information:

a) a reference to this International Standard, i.e. ISO 16906;

b) a complete identification of the product tested, including type, source, colour, and manufacturer's reference numbers;

c) previous history of the sample;

d) a description of the welding process;

e) the mean value of seam strength;

f) the minimum value of seam strength;

g) the type of failure if not in the seam, e.g. failure due to breaking of the test piece;

h) any deviation from this International Standard which could have affected the results.

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