SLOVENSKI STANDARD
SIST EN 666:1999

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Netekstilne talne obloge - Ugotavljanje želiranja

Resilient floor coverings - Determination of gelling

Elastische Bodenbeläge - Bestimmung der Gelierung

Revetements de sol résilients - Détermination de la gélification

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English version

Resilient floor coverings - Determination of gelling

Revêtements de sol résilients - Détermination de la gélification

Elastische Bodenbeläge - Bestimmung der Gelierung

This European Standard was approved by CEN on 1994-11-10. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart,36 B-1050 Brussels

Foreword

This European Standard was prepared by Technical Committee CEN/TC 134 'Resilient and textile floor coverings', 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of an identical text or by endorsement, at the latest by May 1995, and conflicting national standards shall be withdrawn at the latest by May 1995.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

1 Scope

This European Standard specifies a method for determining the degree of gelling of a polyvinyl chloride floor covering. It is primarily intended for production control purposes.

2 Principle

The degree of gelling is indirectly assessed by immersing in a solvent test pieces which have been previously bent to accentuate any break-up due to swelling resulting from intermolecular penetration of the solvent. The test pieces are then examined for changes in the structure of the wear layer.

NOTE: Gelling is complete when the coating has been fully cured by thermal treatment to achieve its full properties. This state is achieved when the structure is uniform throughout and no particles of resin incompletely dissolved in the plasticizers are visible within it.

3 Apparatus and materials

3.1 A glass tank ≥ 50 mm deep, with a lipped lid.

3.2 Steel wire hangers, 3 mm to 5 mm in diameter.

3.3 Clips e.g. screw clips, rubber-tube clips, artery clips.

3.4 Acetone, purity ≥ 99 %.

3.5 Oven, capable of being maintained at (30 ± 1) °C.

4 Sampling and preparation of test pieces

Take a representative sample from the available material, i.e. six pieces of complete material of area 5000 mm^2 to 10 000 mm^2.

Place the pieces of complete material in an oven for 15 min at 30 °C.

Cut out one test piece of minimum dimensions 70 mm x 20 mm from each piece of complete material, ensuring that the edges are clean cut.

5 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.

6 Procedure

Fold the test pieces over, wear layer outwards, to form loops, the ends being held against each other over a length of 4 mm to 5 mm by a clip.

Check the test pieces for damage, particularly in the curved area.

Slip the looped test pieces onto the hangers and fully immerse in acetone taking care that the test pieces do not come into contact with each other.

NOTE: Different materials should not be tested together.

Fresh acetone shall be used for each test.

After 30 min immersion, remove the hangers from the tank and examine the test pieces one at a time with the naked eye, paying particular attention to the curved area.

Examine them again after 2 h drying still held together by the clip.

7 Expression of results

In assessing gelling, the following factors shall not be taken into account:

(a) swelling and hardening of the test pieces;

(b) changes affecting layers other than the wear layer;

(c) detachment of the wear layer from the other layers.

Express any major or minor changes affecting the structure of the wear layer as follows:

(a) superficial cracking;

(b) splits throughout the thickness;

(c) separation i.e. flakes still clinging to the surface but partially detached;

(d) flaking i.e. loss of clearly defined fragments;

(e) pitting i.e. wear layer pitted, in spots or all over.

8 Test report

The test report shall include the following information:

(a) a reference to this standard, i.e. EN 666;

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

(c) the previous history of the sample;

(d) any major or minor changes affecting the structure of the wear layer as described in clause 7;

(e) any deviation from this standard which may have affected the results.