



SLOVENSKI STANDARD
SIST EN 13523-26:2006
01-oktober-2006

Prečiščeno besedilo
SIST EN 13523-26:2006
01-oktober-2006

Coil coated metals - Test methods - Part 26: Resistance to condensation of water

Bandbeschichtete Metalle - Prüfverfahren - Teil 26: Beständigkeit gegen Kondenswasser

Tôles prélaquées - Méthodes d'essai - Partie 26: Résistance à la condensation de l'eau

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Ta slovenski standard je istoveten z: EN 13523-26:2006

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ICS:

25.220.60 Organske prevleke Organic coatings

SIST EN 13523-26:2006 **en**

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ICS 25.220.60

English Version

Coil coated metals - Test methods - Part 26: Resistance to condensation of water

Tôles prélaquées - Méthodes d'essai - Partie 26:
Résistance à la condensation de l'eau

Bandbeschichtete Metalle - Prüfverfahren - Teil 26:
Beständigkeit gegen Kondenswasser

This European Standard was approved by CEN on 27 April 2006.

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.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 13523-26:2006) has been prepared by Technical Committee CEN/TC 139 "Paints and varnishes", the secretariat of which is held by DIN.

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 November 2006, and conflicting national standards shall be withdrawn at the latest by November 2006.

This European Standard EN 13523, *Coil coated metals — Test methods* consists of the following parts:

Part 0: General introduction and list of test methods;

Part 1: Coating thickness;

Part 2: Specular gloss;

Part 3: Colour difference — Instrumental comparison;

Part 4: Pencil hardness;

Part 5: Resistance to rapid deformation (impact test);

Part 6: Adhesion after indentation (cupping test);

Part 7: Resistance to cracking on bending (T-bend test);

Part 8: Resistance to salt spray (fog);

Part 9: Resistance to water immersion;

Part 10: Resistance to fluorescent UV light and water condensation;

Part 11: Resistance to solvents (rubbing test);

Part 12: Resistance to scratching;

Part 13: Resistance to accelerated ageing by the use of heat;

Part 14: Chalking (Helmen method);

Part 15: Metamerism;

Part 16: Resistance to abrasion;

Part 17: Adhesion of strippable films;

Part 18: Resistance to staining;

Part 19: Panel design and method of atmospheric exposure testing;

Part 20: Foam adhesion;

Part 21: Evaluation of outdoor exposed panels;

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Part 22: Colour difference — Visual comparison;

Part 23: Colour stability in humid atmospheres containing sulfur dioxide;

Part 24: Resistance to blocking and pressure marking;

Part 25: Resistance to humidity;

Part 26: Resistance to condensation of water.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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1 Scope

This Part of EN 13523 specifies a procedure for evaluating the condensation resistance of an organic coating (coil coating) on a metallic substrate, by means of exposure in a humidity cabinet under controlled conditions.

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 13523-0:2001, *Coil coated metals — Test methods — Part 0: General introduction and list of test methods*

EN 13523-2, *Coil coated metals — Test methods — Part 2: Specular gloss*

EN 13523-3, *Coil coated metals — Test methods — Part 3: Colour difference — Instrumental comparison*

EN ISO 4628-2, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 2: Assessment of degree of blistering (ISO 4628-2:2003)*

3 Terms and definitions

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For the purposes of this document, the terms and definitions given in EN 13523-0:2001 apply.

4 Principle

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A test panel is exposed to condensation for a pre-determined time and at a specified temperature. Blistering is evaluated as well as, optionally, changes in colour and/or gloss.

5 Apparatus

Ordinary laboratory apparatus and glassware, together with the following:

5.1 Cabinet

The apparatus shall consist of an electrically heated water bath with temperature control, a covering frame as a support for the test panels at an angle of $(60 \pm 5)^\circ$ to the horizontal and a means of measuring the temperature of the air space below the panels. This air space shall be completely enclosed using blanking panels if necessary.

A cabinet design as specified in EN ISO 6270-1 would be suitable.

6 Sampling

See EN 13523-0.

7 Test panels

See EN 13523-0.

The panels (usually 150 mm × 100 mm) shall be flat and free from contamination.

8 Procedure

8.1 Exposure

Determine the gloss and colour before exposure. There should be no blistering on the surface of the test panels.

Position the test panels in the frame at an angle of $(60 \pm 5)^\circ$ to the horizontal with the test surface facing down.

Control the temperature of the water so that the temperature in the air space above the water is maintained at $(38 \pm 2)^\circ\text{C}$.

Use deionised water, preferably of grade 3 conforming to EN ISO 3696, and maintain the quantity of the water throughout the test at the level prescribed by the manufacturer of the apparatus.

The ambient temperature around the cabinet should not exceed 23°C .

Unless otherwise agreed, expose the test panels for at least 1 000 h.

Other conditions may be agreed upon.

8.2 Evaluation

At the end of the required exposure period remove the panels from the cabinet, gently wipe off the moisture with a soft tissue and immediately conduct the final evaluation.

If required, take photographs to record any change caused by exposure.

Inspect the surface for blisters in accordance with EN ISO 4628-2. If specified, evaluate the gloss difference in accordance with EN 13523-2 and the colour difference in accordance with EN 13523-3.

NOTE Edges are not evaluated, as they are affected by the frame.

9 Expression of results

The results shall be expressed as:

- blistering in accordance with EN ISO 4628-2;
- gloss difference in accordance with EN 13523-2;
- colour difference in accordance with EN 13523-3.

10 Precision

No precision data are currently available.

11 Test report

The test report shall contain at least the following information:

- a) all details necessary to identify the product tested;
- b) a reference to this Part of EN 13523, i.e. EN 13523-26;
- c) the duration of the exposure, in hours;
- d) the results of the test, as indicated in Clause 9;
- e) any deviation from the test method specified;
- f) the date(s) of the test.

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