

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

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See Eesti standard EVS-EN 13523-26:2022 sisaldab Euroopa standardi EN 13523-26:2022 ingliskeelset teksti.	This Estonian standard EVS-EN 13523-26:2022 consists of the English text of the European standard EN 13523-26:2022.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
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EUROPEAN STANDARD

EN 13523-26

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN 13523-26:2014

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 19 December 2021.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 13523-26:2022) 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of an identical text or by endorsement, at the latest by August 2022, and conflicting national standards shall be withdrawn at the latest by August 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13523-26:2014.

The main changes are:

- a) EN ISO 3696 has been added to 6.1 as reference for the deionised water;
- b) a remark concerning the assessment of organic coated steel substrates having multiple metallic phases in zinc based coating has been added to Clause 10;
- c) the list of the existing parts of EN 13523 has been updated;
- d) the text has been editorially revised and the normative references have been updated.

The EN 13523 series, *Coil coated metals — Test methods*, consists of the following parts:

- *Part 0: General introduction*
- *Part 1: Film thickness*
- *Part 2: Gloss*
- *Part 3: Colour difference and metamerism — 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 radiation 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 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*
- *Part 22: Colour difference — Visual comparison*
- *Part 23: Resistance to 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*
- *Part 27: Resistance to humid poultice (Cataplasm test)*
- *Part 29: Resistance to environmental soiling (Dirt pick-up and striping)*

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This document specifies a procedure for evaluating the resistance to continuous condensation of an organic coating on a metallic substrate, by means of exposure in a humidity cabinet under controlled conditions.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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, *Coil coated metals — Test methods — Part 0: General introduction*

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

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

EN ISO 3696:1995, *Water for analytical laboratory use — Specification and test methods (ISO 3696:1987)*

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)*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

4 Principle

A test panel is exposed to continuous water condensation for a pre-determined time and at a specified temperature. The test panel is evaluated for any changes such as blistering or corrosion, e.g. red rust, white rust. Optionally, changes in colour and/or gloss are evaluated as well.

5 Apparatus

Ordinary laboratory apparatus and glassware, together with the following:

5.1 Humidity cabinet.

The apparatus consists essentially of an electrically heated water bath with temperature control and a cover designed to support the test panels which are placed at an angle of $(60 \pm 5)^\circ\text{C}$ to the horizontal, the tested face of the samples is facing down, the other face being exposed to the environment. If necessary, suitable inert blanking samples may be used to ensure the tightness of the chamber. The insulation of the humidity cabinet shall be enough to guarantee constant temperature of the air space below the panels.

An example for humidity cabinet design is given in Figure 1.