

**Coil coated metals - Test methods - Part 10: Resistance to fluorescent UV light and water condensation**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13523-10:2010 sisaldab Euroopa standardi EN 13523-10:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.05.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 24.03.2010.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 13523-10:2010 consists of the English text of the European standard EN 13523-10:2010.

This standard is ratified with the order of Estonian Centre for Standardisation dated 31.05.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 24.03.2010.

The standard is available from Estonian standardisation organisation.

ICS 25.220.60

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English Version

**Coil coated metals - Test methods - Part 10: Resistance to  
fluorescent UV radiation and water condensation**

Tôles prélaquées - Méthodes d'essai - Partie 10 :  
Résistance à un rayonnement UV fluorescent et à la  
condensation de l'eau

Bandbeschichtete Metalle - Prüfverfahren - Teil 10:  
Beständigkeit gegen UV-Strahlung mit Leuchtstofflampen  
und Kondensation von Wasser

This European Standard was approved by CEN on 20 February 2010.

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 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 Management Centre has the same status as the official versions.

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## Foreword

This document (EN 13523-10:2010) 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 September 2010, and conflicting national standards shall be withdrawn at the latest by September 2010.

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

This document supersedes EN 13523-10:2001.

The main technical changes are:

- a) the title is changed;
- b) UV light is changed to UV radiation;
- c) black-standard temperature is changed to black-panel temperature;
- d) amendments concerning the UV lamps are made;
- e) a clause on calibration is added.

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

- *Part 0: General introduction and list of test methods*
- *Part 1: Film 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 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 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*
- *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*
- *Part 27: Resistance to humid poultice (Cataplasma test)*
- *Part 29: Resistance to environmental soiling (Dirt pick-up and striping)*

According to the CEN/CENELEC Internal Regulations, the national standards organizations 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## 1 Scope

This European Standard specifies the basic principles and procedure for determining the resistance of an organic coating on a metallic substrate (coil coating) to a combination of fluorescent UV radiation, and water condensation and temperature under controlled conditions.

**Due to varied conditions which occur during natural weathering and the extreme nature of accelerated testing, correlation between the two cannot be expected.**

Not all organic coatings will perform on an equal basis but a degree of correlation between the same generic type might be observed.

## 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 13523-14, *Coil coated metals — Test methods — Part 14: Chalking (Helmen method)*

EN 13523-22, *Coil coated metals — Test methods — Part 22: Colour difference — Visual comparison*

EN ISO 11507, *Paints and varnishes — Exposure of coatings to artificial weathering — Exposure to fluorescent UV lamps and water (ISO 11507:2007)*

## 3 Terms and definitions

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

## 4 Principle

The coating is exposed in a cyclic manner to UV radiation, condensation of water and temperature under controlled conditions.

One of two types of fluorescent UV lamps, UVA-340 or UVB-313, are used.

After exposure to UV radiation under controlled conditions chalking and changes in gloss and colour are assessed.

## 5 Apparatus and materials

Ordinary laboratory apparatus and glassware, together with the following.

### 5.1 Test chamber.