# SLOVENSKI STANDARD
# kSIST FprEN 13523-26:2014

**01-marec-2014**

---

**Prevlečene kovine, ki se navijajo - Preskusne metode - 26. del: Odpornost proti kondenzaciji vode**

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 d'eau

**Ta slovenski standard je istoveten z:** **FprEN 13523-26**

---

**ICS:**

| | | |
|---|---|---|
| 17.040.20 | Lastnosti površin | Properties of surfaces |
| 25.220.60 | Organske prevleke | Organic coatings |

**kSIST FprEN 13523-26:2014** **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# FINAL DRAFT
# FprEN 13523-26

February 2014

ICS 25.220.60

Will supersede EN 13523-26:2006

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 draft European Standard is submitted to CEN members for formal vote. It has been drawn up by the Technical Committee CEN/TC 139.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

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

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

**Warning** : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

# Contents

Page

Foreword ..... 3
1 Scope ..... 5
2 Normative references ..... 5
3 Terms and definitions ..... 5
4 Principle ..... 5
5 Apparatus ..... 5
5.1 Cabinet ..... 5
6 Sampling ..... 6
7 Test panels ..... 6
8 Procedure ..... 6
8.1 Exposure ..... 6
8.2 Evaluation ..... 7
9 Expression of results ..... 7
10 Precision ..... 7
11 Test report ..... 7
Bibliography ..... 8

# Foreword

This document (FprEN 13523-26:2014) has been prepared by Technical Committee CEN/TC 139 “Paints and varnishes”, the secretariat of which is held by DIN.

This document is currently submitted to the Formal Vote.

This document will supersede EN 13523-26:2006.

The main technical changes are:

a) the description of the water cabinet was amended and a figure showing an example of a water cabinet was introduced;

b) exposure times for the test panels are amended.

EN 13523, *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 — 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: 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)*

# 1 Scope

This Part of EN 13523 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, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

prEN 13523-0:2013, *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 — 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)*

# 3 Terms and definitions

For the purposes of this document, the definitions given in prEN 13523-0:2013 apply.

# 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.

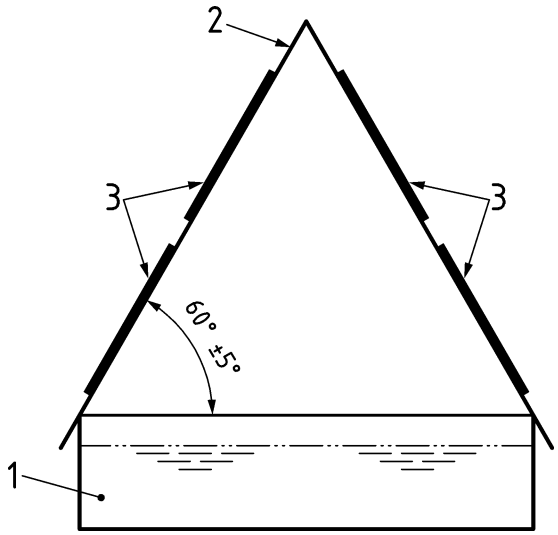
# 5 Apparatus

Ordinary laboratory apparatus and glassware, together with the following:

## 5.1 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 ± 5)° 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 cabinet shall be enough to guarantee constant temperature of the air space below the panels.

An example for cabinet design is given in Figure 1.




**Key**

1 heated water bath
2 cover
3 test panel

**Figure 1 — Principle design of the humidity cabinet (cross view)**

## 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

If specified, determine the gloss and colour before exposure.

Position the test panels in the frame at an angle of (60 ± 5)° 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 ± 2) °C.

Use deionised water, having a conductivity not greater than 0,5 mS/m and maintain the quantity of the water throughout the test.

Ambient temperature around the cabinet shall not exceed 23 °C.

Expose the test panels for 500 h, 1 000 h or 1 500 h, unless otherwise agreed.