

**Coil coated metals - Test methods - Part 22: Colour  
difference - Visual comparison**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13523-22:2010 sisaldab Euroopa standardi EN 13523-22:2010 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 13523-22:2010 consists of the English text of the European standard EN 13523-22:2010.

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 22: Colour difference -  
Visual comparison**

Tôles prélaquées - Méthodes d'essai - Partie 22: Différence  
de couleur - Comparaison visuelle

Bandbeschichtete Metalle - Prüfverfahren - Teil 22:  
Farbabstand - Visueller Vergleich

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 13523-22:2010) 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 13523-22:2003.

The main changes are:

- a) the text was revised editorially and the normative references were updated.

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 procedure for determining the difference in the colour of an organic coating on a metallic substrate by visual comparison against a standard using either diffuse natural daylight or artificial daylight in a standard booth.

NOTE Results might differ between natural and artificial daylight.

It might be that two colour specimens will match in daylight but not under another light source. This phenomenon is known as metamerism (see EN 13523-15).

If metameric match is to be reported in objective terms, spectrophotometric measurements (using CIE Standard Illuminants D65 and A) should be made, in accordance with EN 13523-15.

No statement is made about either the precision or the accuracy of this procedure since the results derived are neither in numerical form nor do they provide a pass/fail evaluation in objective terms. Therefore, this procedure should only be used where the use of colour measuring instruments is not recommendable (evaluation of colour matches, inspection of metallic colours, etc.).

Although colour measuring instruments should be used where possible, in some cases a visual comparison can be useful (evaluation of colour matches, inspection of metallic colours, etc.).

The standardization of such visual comparisons, by light sources, illuminating and viewing geometry and specimen size, provides for improved uniformity of results. This practice is essential for critical colour matching and is highly recommended for colour inspections.

## 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 ISO 3668, *Paints and varnishes — Visual comparison of the colour of paints (ISO 3668:1998)*

## 3 Terms and definitions

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

### 3.1

#### **colour**

sensation resulting from the visual perception of radiation of a given spectral composition

NOTE The use of the German term "Farbe" in the sense of coating material is deprecated.

[EN ISO 4618:2006, 2.57]

### 3.2

#### **metamerism**

phenomenon characterized by the difference in colour observed when two specimens visually matching under a given light source are viewed under another light source with different spectral characteristics