

**Coil coated metals - Test methods - Part 3: Colour
difference - Instrumental comparison**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 13523-3:2014 sisaldab Euroopa standardi EN 13523-3:2014 inglisekeelset teksti.	This Estonian standard EVS-EN 13523-3:2014 consists of the English text of the European standard EN 13523-3:2014.
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.
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English Version

**Coil coated metals - Test methods - Part 3: Colour difference -
Instrumental comparison**

Tôles prélaquées - Méthodes d'essai - Partie 3 : Différence
de couleur - Comparaison au moyen d'instruments

Bandbeschichtete Metalle - Prüfverfahren - Teil 3:
Farbabstand - Farbmetrischer Vergleich

This European Standard was approved by CEN on 7 May 2014.

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Foreword

This document (EN 13523-3:2014) 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of an identical text or by endorsement, at the latest by December 2014, and conflicting national standards shall be withdrawn at the latest by December 2014.

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 13523-3:2001.

The main technical changes are:

- a) the definitions were aligned with those in EN ISO 4618;
- b) the scope and procedure were 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)*

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1 Scope

This part of EN 13523 specifies procedures for determining the instrumental colour difference (CIELAB) of an organic coating on a metallic substrate.

Establishing a standard as well as the magnitude of an acceptable colour difference are not covered by this method.

Two methods are given in this part of EN 13523:

- a) instrumental colour difference measurement using a tristimulus colorimeter;
- b) instrumental colour difference measurement using a spectrophotometer or equivalent.

Care should be taken when measuring e.g.

- textured surfaces;
- fluorescent coatings;
- metamerism coatings;
- multi-coloured, pearlescent, metallic or special colour effect coatings.

In order to determine whether metamerism is present, the metamerism index is determined (see EN 13523-15) and/or a visual examination (see EN 13523-22) is performed with different artificial light sources.

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.

EN 13523-0:2014, *Coil coated metals — Test methods — Part 0: General introduction*

EN 23270, *Paints and varnishes and their raw materials — Temperatures and humidities for conditioning and testing (ISO 3270)*

EN ISO 11664-4, *Colorimetry — Part 4: CIE 1976 L*a*b* Colour space (ISO 11664-4)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13523-0:2014 and the following apply.

3.1

colour

sensation resulting from the perception of light of a given spectral composition by the human eye

Note 1 to entry: The use of the German word “Farbe” alone, i.e. not in combinations of words, for coating materials is deprecated.