

Coil coated metals - Test methods - Part 14: Chalking
(Helmen method)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 13523-14:2023 sisaldab Euroopa standardi EN 13523-14:2023 ingliskeelset teksti.	This Estonian standard EVS-EN 13523-14:2023 consists of the English text of the European standard EN 13523-14:2023.
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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English Version

Coil coated metals - Test methods - Part 14: Chalking (Helmen method)

Tôles prélaquées - Méthodes d'essai - Partie 14 :
Farinage (méthode Helmen)

Bandbeschichtete Metalle - Prüfverfahren - Teil 14:
Kreiden (Verfahren nach Helmen)

This European Standard was approved by CEN on 6 February 2023.

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European foreword

This document (EN 13523-14:2023) 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of an identical text or by endorsement, at the latest by September 2023, and conflicting national standards shall be withdrawn at the latest by September 2023.

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 13523-14:2014.

The main changes compared to the previous edition are listed below:

- a) the description of the test apparatus has been changed so that the glossmeter is preferred to the portable chalking apparatus, which is no longer manufactured;
- b) 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 (Cataplasma 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.

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1 Scope

This document describes the procedure for determining objectively the chalking resulting from natural or artificial weathering of an organic coating on a metallic substrate.

The advantage of this procedure for measuring chalking of an organic coating is that the result can be read off immediately on an instrument. Subjective judgement by visual comparison of test specimens with reference specimens is not necessary.

Reproducible results can only be obtained by careful execution of the test. Special attention is paid to the adhesive tape and its application to the test surface.

The test method is not applicable to embossed coatings. In the case of textured coatings, the degree of texture will influence readings. Also, dirt collection can influence readings on outdoor weathered specimens.

NOTE Different methods for assessing chalking are in use. The results of these different methods are not comparable.

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 13523-10, *Coil coated metals - Test methods - Part 10: Resistance to fluorescent UV radiation and water condensation*

EN 13523-19, *Coil coated metals - Test methods - Part 19: Panel design and method of atmospheric exposure testing*

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

EN 60454-2, *Pressure-sensitive adhesive tapes for electrical purposes - Part 2: Methods of test*

EN ISO 2813, *Paints and varnishes - Determination of gloss value at 20°, 60° and 85° (ISO 2813)*

3 Terms and definitions

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

ISO and IEC maintain terminology 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/>

3.1

chalking

appearance of a loosely adherent powder on the surface of a film or coat arising from the degradation of one or more of its constituents

[SOURCE: EN ISO 4618:2014, 2.41]