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Coil coated metals - Test methods - Part 1: Film thickness

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/24

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EN 13523-1

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Supersedes EN 13523-1:2017

English Version

Coil coated metals - Test methods - Part 1: Film thickness

Tôles prélaquées - Méthodes d'essai - Partie 1 :
Épaisseur du feuil

Bandbeschichtete Metalle - Prüfverfahren - Teil 1:
Schichtdicke

This European Standard was approved by CEN on 1 January 2024.

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

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EN 13523-1:2024 (E)

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European foreword

This document (EN 13523-1:2024) 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of an identical text or by endorsement, at the latest by October 2024, and conflicting national standards shall be withdrawn at the latest by October 2024.

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 13523-1:2017.

EN 13523-1:2024 includes the following significant technical changes with respect to EN 13523-1:2017:

- a) ruggedized optical interference (ROI) has been added as method E;
- 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*

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- *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 specifies the procedures for determining the dry-film thickness of an organic coating on a metallic substrate (coil coating).

Five appropriate methods are given in this document:

- a) magnetic induction;
- b) eddy current;
- c) micrometer;
- d) optical;
- e) ruggedized optical interference.

The methods are applicable only to products with smooth and flat substrates, but the coating itself can be textured. In that case, for methods a) and b), the average of a series of readings will represent an average of the thickness of the organic coating, while method c) will give the maximum thickness, method d) can provide the minimum, maximum and average thickness, and e) will give the total thickness.

Non-destructive continuous-web methods on measurement of dry-film thickness are only applicable on method a).

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 13523-0:2021, *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 3611, *Geometrical product specifications (GPS) - Dimensional measuring equipment - Design and metrological characteristics of micrometers for external measurements (ISO 3611)*

ASTM D8331, *Standard Test Method for Measurement of Film Thickness of Thin-Film Coatings by Non-Destructive Means Using Ruggedized Optical Interference*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN