

BS EN 13523-0:2014



BSI Standards Publication

Coil coated metals — Test methods

Part 0: General introduction

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National foreword

This British Standard is the UK implementation of EN 13523-0:2014. It supersedes BS EN 13523-0:2001 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee STI/21, Surface preparation of steel.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

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Allgemeine Einleitung

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Foreword

This document (EN 13523-0:2014) 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of an identical text or by endorsement, at the latest by December 2014, and conflicting national standards shall be withdrawn at the latest by December 2014.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 13523-0:2001.

The main technical changes are:

- a) the title of the standard was changed;
- b) the definitions were aligned with those in EN ISO 4618;
- c) the list of the existing parts of EN 13523 was updated;
- d) a note on rolling direction was added;
- e) the normative references were updated.

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 (Cataplasma test)*
- *Part 29: Resistance to environmental soiling (Dirt pick-up and striping)*

The test methods described in the various parts of EN 13523 are based on the results of work of the European Coil Coating Association (ECCA), Brussels.

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, 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 the United Kingdom.

1 Scope

EN 13523 specifies test methods for organic coatings on coil coated metals.

This part of EN 13523 specifies the overall scope of all parts of EN 13523, gives definitions common to all parts and describes how sampling and preparation of test panels for most of the individual test methods are to be carried out.

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 (all parts), *Coil coated metals — Test methods*

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

3 Terms and definitions

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

3.1

category 1 coating

coating formed from the application of either liquid paint or coating powder that has a dry film thickness of up to 60 µm

3.2

category 2 coating

coating formed from the application of either liquid paint or coating powder that has a dry film thickness of greater than 60 µm, or a laminated plastics film

3.3

coat

layer of a coating material resulting from a single application

[SOURCE: FprEN ISO 4618:2014, 2.49, modified, Note 1 to entry deleted]

3.4

coating material

product, in liquid, paste or powder form, that, when applied to a substrate, forms a layer possessing protective, decorative and/or other specific properties

Note 1 to entry: For the purposes of EN 13523, plastics films are also considered as coating materials.

[SOURCE: FprEN ISO 4618:2014, 2.51, modified, Note 1 to entry changed]

3.5

coil coating metal

metal on which a coating material has been applied by coil coating

3.6

coil coating

coating process whereby the coating material is applied continuously to a coil of metal which may be rewound after the film has been dried

Note 1 to entry: This process may include cleaning and/or pre-treatment of the metal surface, and includes:

- either one-side or two-side, single or multiple application of (liquid) paints or coating powders which are subsequently cured
- or laminating with plastics films.

[SOURCE: FprEN ISO 4618:2014, 2.56, modified, Note 1 to entry added]

3.7

organic coating

dry paint film of the coated product or the plastics film of the film/metal laminate

[SOURCE: EN 10169:2010+A1:2012, 3.20]

3.8

paint

pigmented coating material which, when applied to a substrate, forms an opaque dried film having protective, decorative or specific technical properties

[SOURCE: FprEN ISO 4618:2014, 2.184]

3.9

pick-off

amount of organic coating removed after the application and removal of an adhesive tape

3.10

substrate

surface to which the coating material is applied or is to be applied

[SOURCE: FprEN ISO 4618:2014, 2.244]

4 Sampling

Unless otherwise specified or agreed, take representative samples from the full width of the coil coated metal to be tested, of sufficient size to carry out the required tests.

5 Preparation of test panels

Prepare test panels from the representative samples obtained as described in Clause 4.

Unless otherwise specified or agreed, the test panels shall be flat and of the size specified in the individual test method.

NOTE Sampling with or across the rolling direction might influence the result of some test methods.

6 Conditioning of test panels

Test panels shall be brought to ambient temperature before testing.

Conditioning of test panels is not normally carried out. If specified or in case of dispute, condition the test panels immediately prior to the individual test at a temperature of $(23 \pm 2) ^\circ\text{C}$ and a relative humidity of $(50 \pm 5) \%$ in accordance with EN 23270, for a minimum of 24 h.

7 Test conditions

Carry out the test (including evaluation) at ambient temperature, if not otherwise specified by the individual test method. In cases of dispute, the test temperature shall be defined as (23 ± 2) °C and the relative humidity as (50 ± 5) %, in accordance with EN 23270.

Bibliography

- [1] EN 1396, *Aluminium and aluminium alloys — Coil coated sheet and strip for general applications — Specifications*
- [2] EN 10169:2010+A1:2012, *Continuously organic coated (coil coated) steel flat products — Technical delivery conditions*
- [3] FprEN ISO 4618:2014, *Paints and varnishes — Terms and definitions (ISO/FDIS 4618:2014)*

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