Irish Standard
I.S. EN 13523-5:2014

Coil coated metals - Test methods - Part 5: Resistance to rapid deformation (impact test)

I.S. EN 13523-5:2014

Incorporating amendments/corrigenda/National Annexes issued since publication:

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English Version

Coil coated metals - Test methods - Part 5: Resistance to rapid deformation (impact test)

Tôles prélaquées - Méthodes d'essai - Partie 5 : Résistance à la déformation rapide (essai de choc)

Bandbeschichtete Metalle - Prüfverfahren - Teil 5: Widerstandsfähigkeit gegen schnelle Verformung (Schlagprüfung)

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

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Foreword

This document (EN 13523-5:2014) 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of an identical text or by endorsement, at the latest by December 2014, and conflicting national standards shall be withdrawn at the latest by December 2014.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 13523-5:2001.

The main technical changes are:

a) the limitation in the scope to coatings having a thickness of 60 µm maximum was deleted;

b) a remark on preconditioning was added;

c) details on the brands of the tape used were added;

d) in addition to use a × 10 magnifying glass, the evaluation shall be carried out with normal corrected vision.

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 the procedure for determining the resistance to cracking and/or pick-off on rapid deformation of an organic coating on a metallic substrate in terms of energy which the specimen will withstand.

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 60454-2, *Pressure-sensitive adhesive tapes for electrical purposes — Part 2: Methods of test (IEC 60454-2)*

EN ISO 6272-1, *Paints and varnishes — Rapid-deformation (impact resistance) tests — Part 1: Falling-weight test, large-area indenter (ISO 6272-1)*

3 Terms and definitions

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

4 Principle

The test specimen is deformed (indentation in the form of a dome), using a falling weight. Usually, the deformation is carried out from the reverse side but can occasionally be carried out directly on the coated surface under test.

The resistance of the coating to cracking and/or pick off is then determined.

5 Apparatus and materials

5.1 Apparatus in accordance with EN ISO 6272-1, equipped with a hemispherical striker, of diameter 20 mm and having two scales, one of which corresponding to a mass of 1 000 g, the other to a mass of 2 000 g.

5.2 Magnifying glass × 10.

5.3 Transparent pressure-sensitive adhesive tape, 25 mm wide, with an adhesion strength of (10 ± 1) N per 25 mm width when tested in accordance with EN 60454-2.

6 Sampling

See EN 13523-0.