# Coil coated metals - Test methods - Part 20: Foam adhesion



EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

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|---|---|
| See Eesti standard EVS-EN 13523-20:2011 sisaldab Euroopa standardi EN 13523-20:2011 ingliskeelset teksti. | This Estonian standard EVS-EN 13523-20:2011 consists of the English text of the European standard EN 13523-20:2011. |
| 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. |
| Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 07.12.2011. | Date of Availability of the European standard is 07.12.2011. |
| Standard on kättesaadav Eesti Standardikeskusest. | The standard is available from the Estonian Centre for Standardisation. |



Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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# Coil coated metals - Test methods - Part 20: Foam adhesion

Tôles prélaquées - Méthodes d'essai - Partie 20: Adhérence des mousses

Bandbeschichtete Metalle - Prüfverfahren - Teil 20: Haftfestigkeit von Schaum

This European Standard was approved by CEN on 15 October 2011.



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

**Management Centre: Avenue Marnix 17, B-1000 Brussels**



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## Foreword

This document (EN 13523-20:2011) 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of an identical text or by endorsement, at the latest by June 2012, and conflicting national standards shall be withdrawn at the latest by June 2012.

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 13523-20:2004.

EN 13523, *Coil coated metals — Test methods*, consists of the following parts:

— *Part 0: General introduction and list of test methods*;

— *Part 1: Film thickness*;

— *Part 2: Specular 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: Colour stability in 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)*.

The main technical changes are:

— The description of the foam is updated;

— The description of scraping tool is clarified.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

# 1 Scope

This European Standard describes a laboratory method for testing foam adhesion to an organic coating on a metallic substrate under dry and wet conditions.

# 2 Normative references

The following referenced documents are indispensable for the application 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 13523-0:2001, *Coil coated metals — Test methods — Part 0: General introduction and list of test methods*

# 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13523-0:2001 apply.

# 4 Material

## 4.1 Foam.

Organic insulation material created by mixing polyols and isocyanates to make (for example) polyurethane (PUR) or polyisocyanurate (PIR) foams.

Mixing and handling of foams shall be carried out in line with the foam manufacturer's recommendations.

NOTE In the industrial process of sandwich panel manufacture, the constituent liquids of the foam are mixed just prior to application, which then expand rapidly to fill the gap between two outward facing sheets of coated metal, usually in a continuous process.

# 5 Principle

The foam adhesion is tested by pulling off the foam from the coil coated metal sheet.

The test has only two possible results: “passed” or “failed”.

# 6 Apparatus

Ordinary laboratory apparatus and glassware, together with the following:

**6.1 Humidity cabinet** capable of being maintained at 100 % relative humidity at a temperature of (40 ± 2) °C.

# 7 Sampling

See EN 13523-0.