

Continuously organic coated (coil coated) steel flat products —

Part 2: Products for building exterior applications

ICS 25.220.60; 77.140.50

National foreword

This Draft for Development is the English language version of ENV 10169-2:1999.

This publication is not to be regarded as a British Standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature because the subject matter is still under development requiring wider exposure. It should be applied on this provisional basis, so that information and experience of its practical application may be obtained.

Comments arising from the use of this Draft for Development are requested so that UK experience can be reported to the European organization responsible for its conversion into a European Standard. A review of this publication will be initiated 2 years after its publication by the European organization so that a decision can be taken on its status at the end of its three-year life. The commencement of the review period will be notified by an announcement in *Update Standards*.

According to the replies received by the end of the review period, the responsible BSI Committee will decide whether to support the conversion into a European Standard, to extend the life of the prestandard or to withdraw it. Comments should be sent in writing to the Secretary of BSI Subcommittee ISE/10/8, Coated steel flat rolled products, at 389 Chiswick High Road, London W4 4AL, giving the document reference and clause number and proposing, where possible, an appropriate revision of the text.

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

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

Summary of pages

This document comprises a front cover, an inside front cover, the ENV title page, pages 2 to 25 and a back cover.

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Amendments issued since publication

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English version

Continuously organic coated (coil coated) steel flat products -
Part 2: Products for building exterior applications

Produits plats en acier revêtus en continu de matières
organiques (prélaqués) - Partie 2: Produits pour
applications extérieures dans le bâtiment

Kontinuierlich organisch beschichtete (bandbeschichtete)
Flacherzeugnisse aus Stahl - Teil 2: Erzeugnisse für den
Bauaußeneinsatz

This European Prestandard (ENV) was approved by CEN on 19 May 1999 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This European Prestandard has been prepared by Technical Committee ECISS/TC 27 “Surface coated flat products - Qualities, dimensions, tolerances and specific tests”, the secretariat of which is held by DIN.

This European Prestandard is expected to be re-issued as a full European Standard when Annex F “Classification of coatings into corrosion protection and UV resistance categories from outdoor exposure tests” can be assigned normative status. In this Prestandard Annex F is included as an informative annex until more information becomes available on the classification of different types of exterior environment and on methods of assessing performance in outdoor exposure testing.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Prestandard gives the specific requirements for continuously organic coated (coil coated) steel flat products used for building exterior applications.

It particularly specifies the performance requirements of different product flexibility categories, different corrosion protection categories and different UV resistance categories.

General information concerning continuously organic coated steel flat products is provided by EN 10169-1.

Products for building interior applications will be covered by EN 10169-3 which is in preparation at present.

The products covered are wide strip, sheet cut from wide strip, slit wide strip, strip rolled in widths less than 600 mm and cut lengths (from sheet or strip).

2 Normative references

This European Prestandard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. Subsequent amendments to, or revisions of, any of these publications apply to this European Prestandard only when incorporated in it by amendment or revision. In the case of undated references, the latest edition of the publications referred to applies.

CR 10260, *Designation systems for steel - Additional symbols*

ENV 606, *Bar coded transport and handling labels for steel products*

EN 10020, *Definition and classification of grades of steel*

EN 10021, *General technical delivery requirements for steel and steel products*

EN 10027-1, *Designation systems for steel - Part 1 : Steel names, principal symbols*

EN 10027-2, *Designation systems for steel - Part 2: Steel numbers*

EN 10079, *Definition of steel products*

EN 10142, *Continuously hot-dip zinc coated low carbon steel strip and sheet for cold forming - Technical delivery conditions*

EN 10143, *Continuously hot-dip metal coated steel sheet and strip - Tolerances on dimensions and shape*

EN 10147, *Continuously hot-dip zinc-coated structural steel strip and sheet - Technical delivery conditions*

EN 10154, *Continuously hot-dip aluminium-silicon (AS) coated steel strip and sheet - Technical delivery conditions*

EN 10169-1, *Continuously organic coated (coil coated) steel flat products - Part 1 : General information (definitions, materials, tolerances, test methods)*

EN 10169-3¹⁾, *Continuously organic coated (coil coated) steel flat products - Part 3: Products for building interior applications*

EN 10204, *Metallic products - Types of inspection documents (includes amendment A1:1995)*

EN 10214, *Continuously hot-dip zinc-aluminium (ZA) coated steel strip and sheet - Technical delivery conditions*

EN 10215, *Continuously hot-dip aluminium-zinc (AZ) coated steel strip and sheet - Technical delivery conditions*

EN ISO 1520, *Paints and varnishes - Cupping test*

EN ISO 2409, *Paints and varnishes - Cross-cut test*

EN ISO 12944-2, *Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 2: Classification of environments*

ISO 2810, *Paints and varnishes - Natural weathering*

ISO 4628-2, *Paints and varnishes - Evaluation of degradation of paint coatings ; designation of intensity, quantity and size of common defect - Part 2 : Designation of degree of blistering*

ISO 4628-6, *Paints and varnishes - Evaluation of degradation of paint coatings ; designation of intensity, quantity and size of common defect - Part 6: Rating of degree of chalking by tape method*

ISO 4892-3, *Plastics - Methods of exposure to laboratory light sources - Part 3 : Fluorescent UV lamps*

ISO 7253, *Paints and varnishes - Determination of resistance to neutral salt spray fog*

ISO 8044, *Corrosion of metals and alloys - Vocabulary*

ISO 11507, *Paints and varnishes - Exposure of coatings to artificial weathering - Exposure to fluorescent UV and water*

ISO 11997-1, *Paints and varnishes - Determination of resistance to cyclic corrosion conditions - Part 1: Wet (salt fog)/dry/humidity*

ASTM D 4214-89, *Standard test method for evaluating the degree of chalking of exterior paint films*

¹⁾ In preparation.

3 Definitions

For the purpose of this European Prestandard, the following definitions apply in addition to the definitions in EN 10020, EN 10021, EN 10079, EN 10169-1 and EN 10204:

3.1 building exterior applications

All applications in buildings for which the concerned products are submitted to the influence of exterior atmospheres.

NOTE 1 Building products include, for example, ribbed profiles for roofing and walling, curved profiles, brake-pressed profiles, concealed fix roofing and walling, standing seam roofing, corrugated sheeting, factory foamed sandwich panels for roofing and walling, roof tiles, accessories (flashings, trims), rainwater goods (gutters, down pipes), metal doors and garage doors.

NOTE 2 For exterior building elements, it is important that the risk of corrosive attack on internal, i.e. reverse side surfaces, should also be considered. In particular, buildings with wet or chemically polluted internal environments can require a reverse side organic coating selected to provide enhanced corrosion protection.

This can be especially important in double-skin assemblies (e.g. built-up insulated cladding) where the reverse side of the exterior element is not easily accessible for maintenance and/or in situations where the exterior element is expected to provide long term durability.

NOTE 3 Besides the requirements written in this prestandard, other international or national requirements regarding fire resistance, safety etc. can be agreed on at the time of ordering.

3.2 factory production control

The permanent internal control exercised by the manufacturer.

3.3 initial type testing

Group of tests which are originally carried out to demonstrate product conformity to the present prestandard.

3.4 performance test

Test, the result of which should be related to the effective behaviour of the product on site.

3.5 corrosivity

Ability of an environment to cause corrosion in a given corrosion system. [ISO 8044]

3.6 corrosion stresses

The environmental factors which promote corrosion.[EN ISO 12944-2]