SLOVENSKI STANDARD
SIST EN 10169-3:2003

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Z organskimi materiali kontinuirno prevleļ eni (prevleļ eni v svitkih) ploģļ ati jekleni izdelki ï 3. del: Izdelki za notranjo vgradnjo

Continuously organic coated (coil coated) steel flat products - Part 3: Products for building interior applications

Kontinuierlich organisch beschichtete (bandbeschichtete) Flacherzeugnisse aus Stahl - Teil 3: Erzeugnisse für den Bauinneneinsatz

Produits plats en acier revetus en continu de matieres organiques (prélaqués) - Partie 3: Produits pour applications intérieures dans le bâtiment

Ta slovenski standard je istoveten z: **EN 10169-3:2003**

ICS:

25.220.60	Organske prevleke	Organic coatings
77.140.50	Ploģļ ati jekleni izdelki in polizdelki	Flat steel products and semi-products

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This European Standard was approved by CEN on 9 January 2003.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

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

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Contents

Foreword

This document (EN 10169-3:2003) 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 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of an identical text or by endorsement, at the latest by December 2003, and conflicting national standards shall be withdrawn at the latest by December 2003.

EN 10169 consists of the following parts under the general title *Continuously organic coated (coil coated) steel flat products*:

Part 1: *General information (definitions, materials, tolerances, test methods)*;

Part 2: *Products for building exterior applications*;

Part 3: *Products for building interior applications.*

Annexes A and B are informative.

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

1 Scope

This part of this European Standard gives the specific requirements for continuously organic coated (coil coated) steel flat products used for building interior applications.

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

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

Products for building exterior applications are covered by ENV 10169-2.

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

2 Normative references

This European Standard 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. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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

EN 10020:2000, *Definition and classification of grades of steel.*

EN 10021:1993**,** *General technical delivery requirements for steel and iron products.*

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

EN 10027-2, *Designation systems for steel - Part 2: Numerical system.*

EN 10079:1992, *Definition of steel products.*

EN 10130, *Cold rolled low carbon steel flat products for cold forming - Technical delivery conditions.*

EN 10131, *Cold rolled uncoated low carbon and high yield strength steel flat products for cold forming - Tolerances on dimensions and shape.*

EN 10139, *Cold rolled uncoated mild steel narrow strip for cold forming - Technical delivery conditions.*

EN 10140, *Cold rolled narrow steel strip - Tolerances on dimensions and shape.*

EN 10142, *Continuously hot-dip zinc coated low carbon steels 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 steels strip and sheet - Technical delivery conditions.*

EN 10152, *Electrolytically zinc coated cold rolled steel flat products - Technical delivery conditions.*

EN 10154, *Continuously hot-dip Aluminium-Silicon (AS) coated steel strip and sheet - Technical delivery conditions.*

EN 10169-1:1996, C*ontinuously organic coated (coil coated) steel flat products - Part 1: General information (definitions, materials, tolerances, test methods).*

EN 10204:1991, *Metallic products - Types of inspection documents.*

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 10268, *Cold rolled flat products made of high yield strength micro-alloyed steels for cold forming - General delivery conditions.*

EN 10292, *Continuously hot-dip coated strip and sheet of steels with higher yield strength for cold forming - Technical delivery conditions.*

EN 13523-0:2001, *Coil coated metals - Test methods - Part 0: General introduction and list of test methods.*

EN 13523-1, *Coil coated metals - Test methods - Part 1: Coating thickness.*

EN 13523-2, *Coil coated metals - Test methods - Part 2: Specular gloss.*

EN 13523-6, *Coil coated metals - Test methods - Part 6: Adhesion after indentation (cupping test).*

EN 13523-7, *Coil coated metals - Test methods - Part 7: Resistance to cracking on bending (T- bend test).*

EN 13523-8, *Coil coated metals - Test methods - Part 8: Resistance to salt spray (fog).*

EN 13523-9, *Coil coated metals - Test methods - Part 9: Resistance to water immersion.*

EN 13523-18, *Coil coated metals - Test methods - Part 18: Resistance to staining.*

EN 13523-22 , *Coil coated metals - Test methods - Part 22: Colour difference – Visual comparison.*

prEN ISO 4628-2, *Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of changes - Part 2: Assessment of the degree of blistering (identical to ISO/DIS 4628-2:2000).*

EN ISO 6270-1, *Paints and varnishes - Determination of resistance to humidity - Part 1: Continuous condensation (ISO 6270-1:1998).*

EN ISO 8044, *Corrosion of metals and alloys - Basic terms and definitions (ISO 8044:1999).*

EN ISO 12944-2, *Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 2: Classification of environments (ISO 12944-2:1998).*

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

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

3 Terms and definitions

For the purposes of this European Standard the terms and definitions in EN 10020:2000, EN 10021:1993, EN 10079:1992, EN 10169-1:1996, EN 10204:1991 and EN 13523-0:2001 and the following terms and definitions apply.

3.1
building interior applications
all applications in buildings for which the concerned construction products (i.e. components of the building fabric) are submitted to the influence of interior ambiences without significant exposure of any side of the product to the influence of exterior atmospheres

NOTE 1 When one side of the coil coated product is exposed to the influence of exterior atmospheres, reference should be made to ENV 10169-2.

NOTE 2 Building products include, for example interior wall panels for partitions, ceiling panels, suspended frames (for suspended ceilings), factory foamed sandwich panels for cold rooms or rooms with controlled ambience, interior door frames, interior metal doors, interior metal windows.

NOTE 3 Some coil coated products can be used for interior applications having special performance requirements, e.g. lighting. In such cases these particular requirements should also be considered in consultation with the manufacturer.

NOTE 4 For interior building elements, it is important that the risk of corrosive attack on the reverse side of the element should also be considered. This can be especially important in double-skin assemblies (e.g. built up insulated cladding) where the reverse side of the interior element is not easily accessible for maintenance and/or in situations where the interior element is expected to provide long term durability.

NOTE 5 Besides the requirements written in this standard, there can be other international or national requirements or regulations regarding fire, safety, food contact etc. that should be considered at the time of enquiry and order.

3.2
ambiance
environmental conditions which prevail in the interior of the building

NOTE 1 These conditions determine the corrosivity category of the ambience and include different parameters such as the air temperature, the relative humidity, the operating conditions in the building (e.g. use of aggressive chemical products, refrigerated areas).

NOTE 2 It should be noted that the atmosphere surrounding the building can influence the ambience.

NOTE 3 Annex A gives an example of classification of ambiences.

3.3
factory production control
permanent internal control of production exercised by the manufacturer

3.4
initial type of testing
group of tests which are originally carried out to demonstrate product conformity to the present standard

3.5
performance test
test, the result of which should be related to the effective behaviour of the product on site

3.6
corrosivity
ability of an environment to cause corrosion in a given corrosion system (see EN ISO 8044)

3.7
corrosion stresses
environmental factors which promote corrosion (see EN ISO 12944-2)

3.8
corrosion system
system consisting of one or more metals and all parts of the environment which influence corrosion (see EN ISO 8044)

3.9
corrosivity category
category which indicates the corrosivity of the ambience taking into account the use of the building and shall be used for the selection of the appropriate product

3.10
micro environment
environment at the interface between a constituent element of a structure and its surroundings (see EN ISO 12944-2)

NOTE The micro-environment is one of the decisive factors in the assessment of the corrosion stresses.

3.11
corrosion protection (interior) category (CPI)

category of coating which presents a certain level of corrosion protection, the choice of which depends on the corrosivity category, the period of protection and the accessibility

3.12
accessibility
ease of access to the steel components for the purpose of inspection and maintenance without any work over and above that concerned with routine inspection

3.13
period of protection
time between the first exposure of the steel component and the moment at which maintenance works need to be carried out to restore corrosion protection

NOTE The need to restore corrosion protection is deemed to arise when failure of the coating has occurred to the point where a significant amount (for example 5 %) of the component surface exhibits corrosion of the substrate.

3.14
time of wetness
period during which a coated surface is covered by a liquid electrolyte that is capable of causing atmospheric corrosion (see EN ISO 12944-2)

NOTE Guidance value for time of wetness can be calculated from the temperature and humidity relative by summing the hours where the humidity relative is above 80 % and, at the same time, the temperature is above 0 °C.

4 Designation

4.1 For the steel substrates covered by this part of EN 10169 the steel names are allocated in accordance with EN 10027-1 and CR 10260; the steel numbers are allocated in accordance with EN 10027-2.

4.2 The products covered by this part of EN 10169 shall be designated as follows in the order given:

a) type of product (e.g. strip, sheet or cut length, see EN 10079);

b) number of this standard (EN 10169-3);

c) complete designation of the substrate according to the appropriate standard, i.e.:

- steel name or number;
- type and nominal mass of the metal coating;
- number of the standard for the substrate;

d) symbol "OC" for organic coated when no other symbols (see 4.2e)) are given;

e) symbol and nominal thickness, in µm of the organic coating on each side of the product, separated by a slash mark;

NOTE If the nature of the coating material on the side which is not directly exposed to the interior ambience is at the discretion of the manufacturer, it is not stated in the designation.

f) product flexibility range of each side, if appropriate, separated by a slash mark.

NOTE If the nature of the coating material on the side which is not directly exposed to the interior ambience is at the discretion of the manufacturer, the minimum bending radius (to characterize the flexibility range of this side) is not stated in the designation.

g) corrosion protection (interior) category of each side of the product, separated by a slash mark.

NOTE If the nature of the coating material on the side which is not directly exposed to the interior ambience is at the discretion of the manufacturer, the corrosion protection (interior) category of this side is not stated in the designation.

EXAMPLES

a) Strip EN 10169-3 -EN 10142 DX53D+Z275 -SP-PA25-2*T*-CPI2

b) Strip EN 10169-3 -EN 10214 DX53D+ZA255 -SP25/SP25-2*T*/4*T*-CPI2/CPI2

4.3 Any other data, e.g. any required decorative properties (colour, gloss, embossing) or subsequent surface treatment (see 6.2) are to be added in plain text.

4.4 Where appropriate, additional information to the designation as specified in 4.2 shall be given to clearly describe the delivery requirements (see clause 5).

5 Information to be supplied by the purchaser

The following information is required from the purchaser so that the manufacturer may supply the products to conform with the requirements:

a) product type (strip, sheet or cut length);

b) complete designation of the substrate (see 4.2c) and 6.1);

c) complete designation of the coating material, coating system and coating thickness, product, flexibility category and corrosion protection (interior) category of the top side and when applicable of the reverse side (see 4.2d) to g) , 6.2.1 and 6.2.2);

d) where appropriate, details of the required decorative properties and subsequent surface treatment (see 4.3 and 6.2.3);