SLOVENSKI STANDARD
SIST EN 14783:2013

01-junij-2013

Nadomešča:
SIST EN 14783:2006

Povsem podprta pločevina in trakovi za pokrivanje streh ter zunanje in notranje obloge - Specifikacija za izdelek in zahteve

Fully supported metal sheet and strip for roofing, external cladding and internal lining - Product specification and requirements

Vollflächig unterstützte Dachdeckungs- und Wandbekleidungselemente für die Innen- und Außenanwendung aus Metallblech - Produktspezifikation und Anforderungen

Tôles et bandes métalliques totalement supportées pour couverture, bardages extérieur et intérieur - Spécification de produit et exigences

Ta slovenski standard je istoveten z: **EN 14783:2013**

ICS:

77.140.50	Ploščati jekleni izdelki in polizdelki	Flat steel products and semi-products
91.060.10	Stene. Predelne stene. Fasade	Walls. Partitions. Facades
91.060.20	Strehe	Roofs

SIST EN 14783:2013 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 14783

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ICS 77.140.50; 77.150.01; 91.060.10; 91.060.20

Supersedes EN 14783:2006

English Version

Fully supported metal sheet and strip for roofing, external cladding and internal lining - Product specification and requirements

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This European Standard was approved by CEN on 24 February 2013.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.

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 14783:2013) has been prepared by Technical Committee CEN/TC 128 “Roof covering products for discontinuous laying and products for wall cladding”, the secretariat of which is held by NBN.

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 November 2013, and conflicting national standards shall be withdrawn at the latest by November 2013.

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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

This document supersedes EN 14783:2006.

In comparison to the previous edition, the following sections have been modified: Clause 3, subclause 5.3 and Annex ZA.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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

This European Standard specifies the terminology, requirements and test methods for metal coil, strip, and flat sheets and factory made pieces intended for fully supported applications in roofing and wall cladding or lining. It does not apply to products manufactured on site.

This European Standard covers fully-supported aluminium, copper, lead, steel, stainless steel and zinc products with or without coatings, e.g. metallic, organic, inorganic or multi-layer (see Annex A).

This European Standard also includes rules for marking, labelling and evaluation of conformity.

Requirements concerning acoustical and insulation properties are not considered in this European Standard.

This European Standard does not include calculation or design requirements with regards to the works, installation techniques or the performance of the installed products.

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.

CEN/TS 1187, *Test methods for external fire exposure to roofs*

EN 501:1994, *Roofing products from metal sheet — Specification for fully supported roofing products of zinc sheet*

EN 502:2013, *Roofing products from metal sheet — Specification for fully supported roofing products of stainless steel sheet*

EN 504:1999, *Roofing products from metal sheet — Specification for fully supported roofing products of copper sheet*

EN 505:2013, *Roofing products from metal sheet — Specification for fully supported roofing products of steel sheet*

EN 507:1999, *Roofing products from metal sheet — Specification for fully supported roofing products of aluminium sheet*

EN 1427, *Bitumen and bituminous binders — Determination of the softening point — Ring and Ball method*

EN 10088-1, *Stainless steels — Part 1: List of stainless steels*

EN 12588:2006, *Lead and lead alloys — Rolled lead sheet for building purposes*

EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

EN 13501-5, *Fire classification of construction products and building elements — Part 5: Classification using data from external fire exposure to roofs tests*

EN 13823, *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item*

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

EN ISO 6988, *Metallic and other non-organic coatings — Sulphur dioxide test with general condensation of moisture (ISO 6988)*

EN ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227)*

EN ISO 11925-2, *Reaction to fire tests — Ignitability of products subjected to direct impingement of flame — Part 2: Single-flame source test (ISO 11925-2)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 501:1994, EN 502:2013, EN 504:1999, EN 505:2013, EN 507:1999, EN 12588:2006 and the following apply.

3.1
base material
coated or non-coated coil, strip or flat sheet of metal used for the production of a roofing, cladding or lining product according to this European Standard

4 Requirements

4.1 Materials

The materials for the fully supported metal products specified in this European Standard shall be in accordance with the relevant material standards listed in EN 501, EN 502, EN 504, EN 505, EN 507 and EN 12588. For multilayer coated steel sheet, the requirements as given in Annex A shall apply.

4.2 Nominal thickness

The nominal thickness of the fully supported metal products (excluding any organic, inorganic or multilayer coating) shall be equal to or greater than the values given in Table 1 as specified in EN 501, EN 502, EN 504, EN 505, EN 507 and EN 12588.

Table 1 — Minimum nominal values of thickness

Type of metal	Reference of the European Standard	Specified minimum nominal thickness in mm[a]
Aluminium	EN 507	0,6
Copper	EN 504	0,5
Lead	EN 12588	1,25
Stainless steel	EN 502	0,4
Steel	EN 505	0,5
Zinc	EN 501	0,6

[a] Member States of use may require greater thickness than the value shown.

4.3 Water permeability

As long as the products covered by this European Standard have no holes (as defects), they are water impermeable.

Where required, the absence of holes shall be checked by visual inspection of the finished product.

4.4 Dimensional change

The thermal expansion shall be taken into account in the change of dimensions of the product, where this change may have an effect on the performance of the product, by stating the appropriate thermal expansion coefficient.

In the absence of experimental data, the following thermal expansion coefficient shall be used:

— aluminium: 24 x 10^{-6} K^{-1},

— copper: 16,8 x 10^{-6} K^{-1},

— lead: 29,3 x 10^{-6} K^{-1},

— stainless steel: 10,0 x 10^{-6} K^{-1} to 17,0 x 10^{-6} K^{-1}, depending on the grade, according to EN 10088-1,

— steel: 12 x 10^{-6} K^{-1},

— zinc: 22 x 10^{-6} K^{-1},

unless the manufacturer demonstrates by appropriate means that more accurate values are applicable.

4.5 Dimensional tolerances

The dimensional tolerances specified for roof covering products in the applicable standard from the following: EN 501, EN 502, EN 504, EN 505, EN 507 and EN 12588, shall not be exceeded.

For other products, the tolerances declared shall be appropriate, due account being taken of any national provisions of the country of use.

4.6 Vapour and air permeability

As long as the products covered by this European Standard have no holes (as defects), they are air and vapour impermeable.

Where required, the absence of holes shall be checked by visual inspection of the finished product.

4.7 Release of dangerous substances

Where the manufacturer wishes to make a declaration (e.g. when subject to regulatory requirements), the release of dangerous substances of the products specified in this European Standard shall be declared according to the provisions of 5.3.

4.8 Durability

The manufacturer shall state the type, thickness and grade of metal and, if appropriate, type and thickness (or mass) and/or category of any coating(s) to enable users to select products which may be expected to provide the required durability of the product having regard to the expected environment and/or exposure conditions and feasibility of maintenance.

Where this is not appropriate, the durability of the product shall be determined in accordance with the technical specifications valid in the country of use.

4.9 External fire performance

The manufacturer shall declare the external fire performance of the products specified in this European Standard when subject to regulatory requirements, and may declare the external fire performance of the products when not subject to such requirements, according to the provisions of 5.1 or declared as Class F_{ROOF}.

4.10 Reaction to fire

The manufacturer shall declare the reaction to fire performance of the products specified in this European Standard when subject to regulatory requirements, and may declare the external fire performance of the products when not subject to such requirements, according to the provisions of 5.2 or declared as Class F.

5 Testing, assessment and sampling methods

5.1 External fire performance for roof covering products

5.1.1 Products deemed to satisfy the requirements for external fire performance

Products covered by this European Standard are considered "deemed to satisfy without the need for testing" in relation to the requirements for external fire performance provided that they meet the definitions given in Commission Decision 2000/553/EC as amended [1], i.e. coated or non-coated flat or profiled metal sheets of nominal thickness ≥ 0,4 mm provided that any external coating is inorganic or has a gross calorific value, PCS ≤ 4,0 MJ/m^2 or a mass ≤ 200 g/m^2.

NOTE Individual Member States may have "deemed to satisfy" lists which go beyond the list given in the Commission Decision 2000/553/EC.

5.1.2 Products classified without the need for further testing

The following products are considered to be classified in classes $B_{ROOF(t1)}$, $B_{ROOF(t2)}$, $B_{ROOF(t3)}$ and $B_{ROOF(t4)}$ without further testing in accordance with Commission Decision 2005/403/EC: profiled steel sheets, flat steel sheets or panels of coil coated galvanised or zinc-aluminium alloy coated steel of metal thickness ≥ 0,40 mm with an organic external (weather side) coating and, optionally, a reverse (internal) side organic coating. The external coating is of a liquid-applied Plastisol paint of maximum nominal dry film thickness 0,2 mm, a PCS of not greater than 8,0 MJ/m^2 and a maximum dry mass of 330 g/m^2. The reverse side organic coating (if any) shall have a PCS of not greater than 4,0 MJ/m^2 and a maximum dry mass of 200 g/m^2.

NOTE Reference will be made to Commission Decision 2005/403/EC for full details of the product and constructions.

5.1.3 Other products

Products not meeting the definitions as given in 5.1.1 or 5.1.2 shall be tested in accordance with the relevant method(s) in CEN/TS 1187 and classified in accordance with EN 13501-5.

The products to be tested shall be installed, in addition to the general provisions given in CEN/TS 1187, in a manner representative of their intended use.

5.2 Reaction to fire

5.2.1 Products satisfying the requirements for reaction to fire Class A1 without the need for testing

Non-organically coated products are considered to satisfy the requirements for performance Class A1 of the characteristic reaction to fire in accordance with the provisions of EC Decision 96/603, as amended, without the need for testing.

5.2.2 Other products

Products not complying with the provisions of 5.2.1 shall be tested and classified in accordance with EN 13501-1.

When testing in accordance with EN 13823 and/or EN ISO 11925-2, the test conditions shall be as given in Annex B.

5.3 Release of dangerous substances

National regulations on dangerous substances may require verification and declaration on release, and sometimes content, when construction products covered by this standard are placed on those markets.
In the absence of European harmonised test methods, verification and declaration on release/content should be done taking into account national provisions in the place of use.

NOTE An informative database covering European and national provisions on dangerous substances is available at the Construction web site on EUROPA accessed through: *http://ec.europa.eu/enterprise/construction/cpd-ds/*

6 Evaluation of conformity

6.1 General

The conformity of the products covered by this European Standard with the requirements of this European Standard and with the declared values (including classes) shall be demonstrated by:

— initial type testing comprising tests or other means of assessment;

— factory production control by the manufacturer.

If the base material is supplied with information about some or all characteristics required by this European Standard, the re-evaluation of these characteristics is not required for compliance with this European Standard as long as the production process does not change these characteristics.

For the purposes of testing, the products may be grouped into families where it is considered the results for a given characteristic from any one product in the family are representative of all other products within that same family.

A family may be formed for only one characteristic or more than one characteristic. Products within one family for one characteristic may or may not be within the same family in respect of other characteristics.

6.2 Initial type testing (ITT)

6.2.1 General

Initial type testing shall be performed to show conformity with this European Standard.

Tests or assessments previously performed in accordance with the provisions of this European Standard (same product, same characteristic(s), test method, sampling procedure, system of attestation of conformity, etc.) may be taken into account to reduce the number of checks. In addition, initial type testing shall be performed at the beginning of the production of a new sheet or coil type (unless a member of the same family) or at the beginning of a new method of production where this may affect the stated properties on the profile machine and/or the product itself.

Where the roofing, cladding or lining product manufacturer buys a base material whose characteristics have already been determined in accordance with the provisions of this European Standard and are declared by the base material supplier (e.g. following an inspection document conforming to EN 10204), these characteristics need not be reassessed in order to demonstrate conformity with this European Standard, provided that the production process for the roofing, cladding or lining product does not change these characteristics in an unfavourable way. ITT for the characteristics of the roofing, cladding or lining products related to the characteristics of the base material itself are given in Table 2 and may be assessed either by the base material supplier or the roofing, cladding or lining product manufacturer. If those characteristics in Table 3 have not been declared for the base material in accordance with Table 2 or are changed during the production process, the manufacturer claiming compliance with this European Standard shall assess and declare the characteristics of Table 3 that have not been declared.

The base material may be presumed to have the performances stated of them by their supplier, although this does not replace the responsibility on the roofing, cladding or lining product manufacturer to ensure that only a base material having the correct values of characteristics to allow the finished roofing, cladding or lining product to meet the requirements of this European Standard is used.

All characteristics in Clause 4 shall be subject to initial type testing, with the following exceptions:

— external fire performance when using the CWFT option, in accordance with 5.1.2 or when deemed to satisfy in accordance with 5.1.1 (although measurement may be required to ensure that the product meets the definition required for CWFT and deemed to satisfy);

— reaction to fire when deemed to satisfy Class A1, in accordance with 5.2.1;

— release of dangerous substances that may be assessed indirectly by controlling the content of the substance concerned.

Whenever a change occurs in the base material, the finished product or the production process (subject to the definition of a family), which could change significantly one or more of the characteristics, the type tests shall be repeated for the appropriate characteristic(s).

The results of the initial type testing shall be recorded and held by the manufacturer for at least ten years after the end of production of the product to which they apply.