SLOVENSKI STANDARD
SIST EN 502:2000

01-september-2000

Plo̧ evina za prekrivanje streh - Specifikacije za povsem podprte streġne plo̧ġ e iz plo̧ evine iz nerjavnega jekla

Roofing products from metal sheet - Specification for fully supported roofing products of stainless steel sheet

Dachdeckungsprodukte aus Metallblech - Festlegungen für vollflächig unterstützte Bedachungselemente aus nichtrostendem Stahlblech

Produits de couverture en tôle métallique - Spécification pour les produits de couverture en tôle d'acier inoxydable totalement supportés

Ta slovenski standard je istoveten z: **EN 502:1999**

ICS:

77.140.50	Plo̧ġ ati jekleni izdelki in polizdelki	Flat steel products and semi-products
91.060.20	Strehe	Roofs

SIST EN 502:2000 **en**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 502

November 1999

ICS 91.060.20

English version

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This European Standard was approved by CEN on 16 September 1999.

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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 Central Secretariat has the same status as the official versions.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Contents

Foreword

This European Standard 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 IBN.

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of an identical text or by endorsement, at the latest by May 2000, and conflicting national standards shall be withdrawn at the latest by May 2000.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

The annexes A and B are informative.

Introduction

Figure 1 indicates the position of this standard in the CEN framework of standards concerning roofing products of metal.

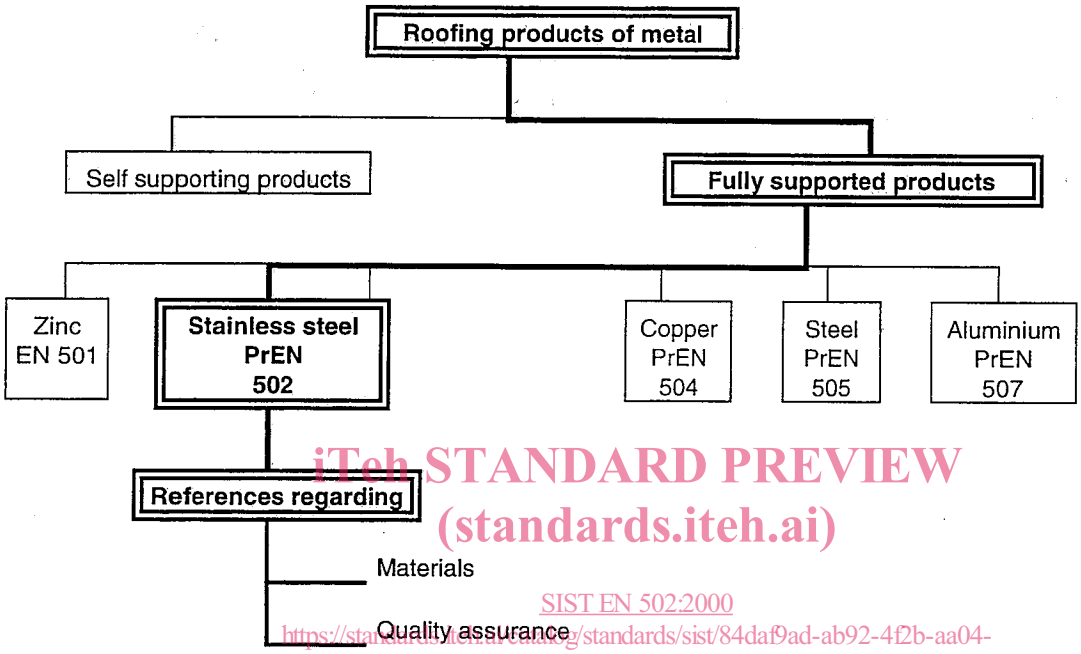

Figure 1 - Framework of standards

In this standard the performance of the product has been defined in terms of a number of type tests.

The performance of a roof constructed with these products depends not only on the properties of the product as it is required by this standard, but also on the design, construction and performance of the roof in relation to the environment and conditions of use.

1 Scope

This European Standard specifies requirements for roofing products used for assembly into coverings for pitched roofs, made from stainless steel, terne coated, tin coated or organic coated stainless steel sheet.

The standard establishes general characteristics, definitions and labelling for the products, together with requirements for the materials from which the products can be manufactured. It is intended to be used either by manufacturers to ensure that their products comply with the requirements or by purchasers to verify that the products comply before they are despatched from the factory. It specifies the requirements for products which enable them to meet all normal service conditions. Products can be prefabricated or semiformed products as well as strip, coil and sheet for on-site-formed applications (e.g. standing seam roofs, roll cap).

The standard applies to all discontinuously laid and fully supported roofing products made of stainless steel sheet. No requirements for application (e.g. methods of fixing, supporting construction, design of roof system, execution of connections and flashings) are included.

NOTE The standard deals partly with flat products, partly with formed (prefabricated) products. Requirements for preformed self-supporting roofing products are given in prEN 508-3.

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.

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

EN 10079, *Definition of steel products.*

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

EN 10088-2, *Stainless steels - Part 2 : Technical delivery conditions for sheet/plate and strip for general purposes.*

EN 10203, *Cold reduced electrolytic tinplate.*

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

EN 10259 :1997, *Cold-rolled stainless steel wide strip and plate/sheet - Tolerances on dimensions and shape.*

prEN ISO 7438, *Metallic materials – Bend test (ISO 7438 :1985).*

3 Terms, definitions, symbols and abbreviations

3.1 Terms and definitions

For the purposes of this standard, the following terms and definitions apply in addition to the definitions in EN 10079 :

3.1.1
stainless steel
steel with at least a content of 10,5 % chromium and max 1,2 % carbon

NOTE For roofing products the stainless steels grades are :

- ferritic,
- austenitic with or without molybdenum ;
- austenitic-ferritic (duplex), and ;
- higher alloyed grades.

3.1.2
terne coated stainless steel
stainless steel continuously hot-dip coated with a lead-tin alloy

3.1.3
tin coated stainless steel
stainless steel continuously coated with tin by electrodeposition

3.1.4
organic coated stainless steel
stainless steel or terne coated stainless steel or tin coated stainless steel which is continuously (factory) painted by roller or spray process

NOTE EN 10169-1 refers to this type of coated steel.

3.1.5
fully supported
installation conditions such, that the bottom flat portions of the product are supported by a continuous construction

3.2 Symbols and abbreviations

The symbols and abbreviations which shall be used for the designation of the steel grades and where applicable of coatings are listed in the respective material standards mentioned in clause 2.

4 Requirements

4.1 General

The product shall be manufactured from materials complying with 4.2.

NOTE 1 The supplier of the materials is responsible for carrying out the tests necessary to verify that the materials supplied to the manufacturer comply with the requirements and should provide appropriate inspection documents (according to EN 10204) on request.

NOTE 2 The symbols and abbreviations to be used to designate the steel grade, the type and mass of the metallic coating are those of the standards referred to in EN 10027-1 and CR 10260.

A permanent quality control system shall be adopted by the manufacturer [1)].

4.2 Materials

4.2.1 Grades

The grades of stainless steel shall be selected depending on the corrosion conditions of the local environment, durability requirements and aesthetic considerations.

NOTE The most commonly used grades are listed in Table 1.

Table 1 - Grades

Steel grade	Steel designation	
	Steel name	Steel number
Ferritic with organic coating	X6Cr13	1.4000
Ferritic with or without organic coating	X6Cr17	1.4016
	X6CrMo17-1	1.4113
	X3CrTi17	1.4510
	X2CrMoTi18-2	1.4521
Austenitic with or without organic coating	X5CrNi18-10	1.4301
Austenitic/Molybdenum with or without organic coating	X5CrNiMo17-12-2	1.4401

4.2.2 Chemical composition

The chemical compositions of stainless steel shall be in accordance with EN 10088-2.

4.2.3 Physical properties

The physical properties for stainless steel shall be in accordance with EN 10088-1.

NOTE Some physical properties are given, for information, in annex A.

4.2.4 Surface finishes of stainless steel

All normal stainless steel finishes can be used including bright finish, 2b in accordance with EN 10088-2, dull finish, 2d and 2a in accordance with EN 10088-2 or other low reflective finishes.

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1) e.g. quality management system based on the relevant standard of EN ISO 9000 series (see EN ISO 9000-1) or otherwise.