

norm

NEN-EN 505

Dakbedekkingsproducten van metaalplaat
- Specificatie voor volledig ondersteunde
dakbedekkingsproducten van staalplaat

Publicatie uitsluitend voor commentaar

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

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Voorbeeld
Preview

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

FINAL DRAFT
FprEN 505

July 2012

ICS 77.140.50; 91.060.20

Will supersede EN 505:1999

English Version

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

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

Dachdeckungsprodukte aus Metallblech - Festlegungen für vollflächig unterstützte Bedachungselemente aus Stahlblech

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Contents

| | |
|--|----|
| Foreword..... | 3 |
| Introduction..... | 4 |
| 1 Scope..... | 5 |
| 2 Normative references..... | 5 |
| 3 Terms, definitions, symbols, units and abbreviated terms..... | 5 |
| 3.1 Terms and definitions..... | 5 |
| 3.2 Symbols and abbreviated terms..... | 7 |
| 4 Requirements..... | 7 |
| 4.1 General..... | 7 |
| 4.2 Materials..... | 8 |
| 4.3 Products..... | 9 |
| 5 Sampling and test methods..... | 11 |
| 5.1 Flat products..... | 11 |
| 5.2 Formed (prefabricated) products..... | 12 |
| 6 Designation..... | 12 |
| 7 Marking, labelling and packaging..... | 12 |
| 7.1 Marking and labelling..... | 12 |
| 7.2 Packaging and any special ordering conditions..... | 13 |
| 7.3 Transport, storage and handling..... | 13 |
| Annex A (informative) Aluminium coated steel sheet (type A)..... | 14 |
| A.1 General..... | 14 |
| A.2 Roof covering products..... | 14 |
| Annex B (normative) Multilayer coated steel sheet..... | 16 |
| B.1 General..... | 16 |
| B.2 Substrate materials..... | 16 |
| B.3 Specific requirements..... | 16 |
| B.4 Freedom from defects..... | 17 |
| Annex C (informative) Metallic coatings..... | 18 |
| Annex D (informative) A-deviations..... | 20 |
| Bibliography..... | 21 |

Foreword

This document (FprEN 505:2012) 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 document is currently submitted to the Unique Acceptance Procedure.

This document will supersede EN 505:1999.

Forbiede
Preview

Introduction

Figure 1 indicates the position of this European Standard in the CEN framework of standards concerning roofing product of metal.

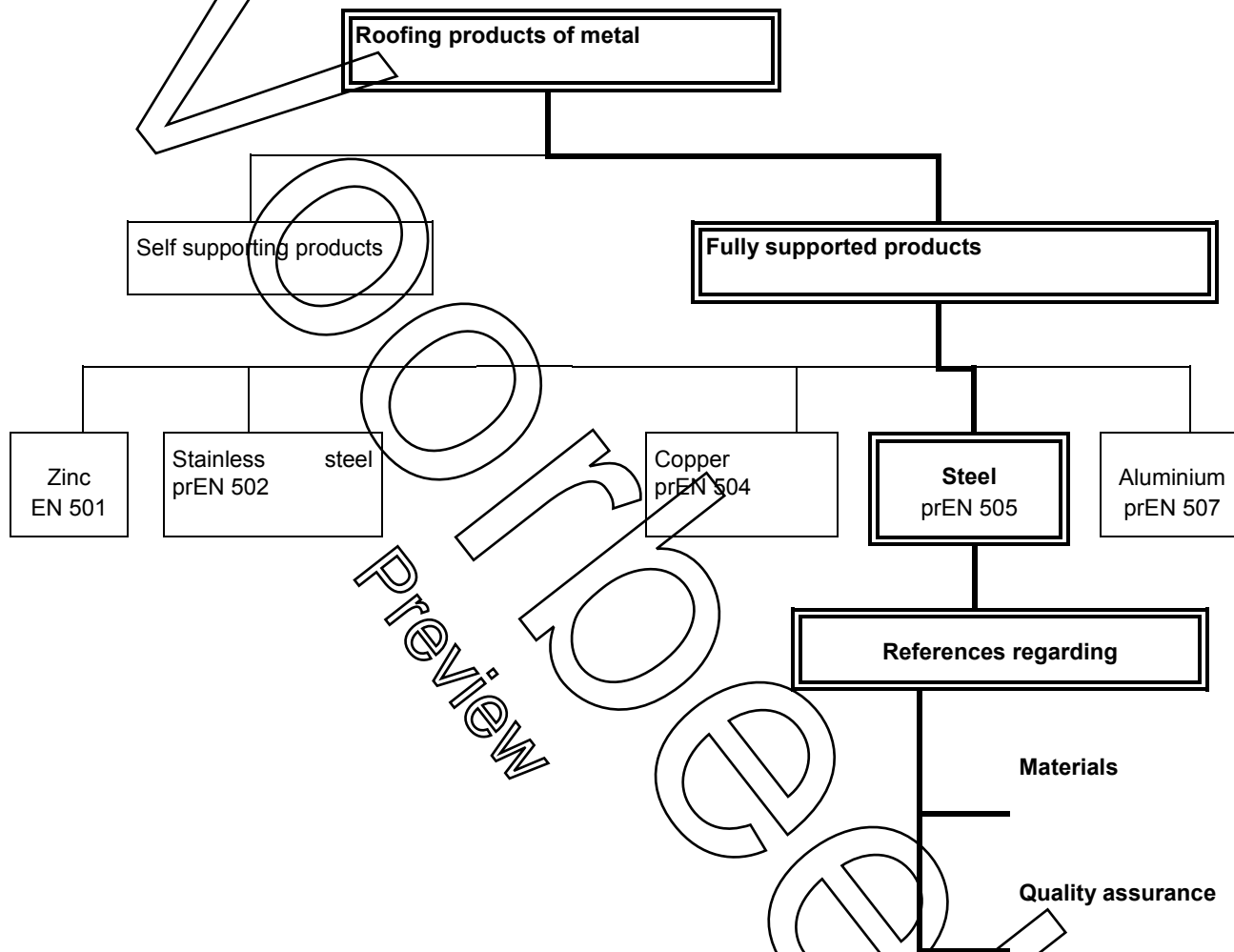


Figure 1 — Framework of standards

In this European 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 European Standard, but also on the design, construction and performance of the roof as a whole in relation to the environment and conditions of use.

Metallic coated steel sheet can be easily fabricated. It can be sheared, punched, pressed, drawn, folded, roll-formed without difficulty within the given limits of the properties listed in the respective material specifications.

Coil coated sheet can be fabricated like metallic coated steel sheet in most applications, but minimum bend radii, design of forming tools, process temperature etc are chosen according to material properties.

1 Scope

This European Standard specifies requirements for roofing products used for assembly into coverings for pitched roofs, made from metallic coated steel sheet with or without additional organic coatings.

The European 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 semifinished products as well as strip, coil and sheet for on-site-formed applications (e.g. standing-seam and clip fixroofs).

The European Standard applies to all discontinuously laid and fully supported roofing products made of steel sheets. No requirements for supporting construction, design of roof system and execution of connections and flashings are included.

NOTE The European Standard deals partly with flat products, partly with formed (prefabricated) products. Requirements for preformed self-supporting products are given in EN 508-1.

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.

EN 508-1, *Roofing products from metal sheet — Specification for self-supporting products of steel, aluminium or stainless steel sheet — Part 1 : Steel*

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

EN 10079:2007, *Definition of steel products*

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

EN 10169, *Continuously organic coated (coil coated) steel flat products — Technical delivery conditions*

EN 10204, *Metallic products — Types of inspection documents*

EN 10346, *Continuously hot-dip coated steel flat products — Technical delivery conditions*

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 — Sulfur dioxide test with general condensation of moisture (ISO 6988)*

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

3 Terms, definitions, symbols, units and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 10079:2007 and the following apply.

FprEN 505:2012 (E)**3.1.1****hot-dip zinc coated steel sheet (type Z)**

product obtained by continuously hot-dip zinc coating cold reduced strips of either low carbon steel for cold forming to EN 10346 or steel of structural quality to EN 10346

3.1.2**hot-dip zinc-aluminium coated steel sheet (type ZA)**

product obtained by continuously hot-dip coating cold reduced strips of low carbon steel for cold forming steel or steel of structural quality on a production line using an alloy consisting of:

- 5% aluminium (nominal percentage by mass);
- 95% zinc (nominal percentage by mass);
- small amounts of mischmetal

Note 1 to entry: EN 10346 refers to this type of steel.

3.1.3**hot-dip aluminium-zinc coated steel sheet (type AZ)**

product obtained by continuously hot-dip coating cold reduced strips of low carbon steel for cold forming or steel of structural quality on a production line using an alloy consisting of:

- 55 % aluminium (nominal percentage by mass);
- 1,5 % silicon (nominal percentage by mass);
- balance zinc

Note 1 to entry: EN 10346 refers to this type of steel.

3.1.4**hot-dip aluminium-coated steel sheet (type A)**

product obtained by continuously hot-dip aluminium coating cold reduced strips of low carbon steel for cold forming or steel of structural quality on a continuous production line

Note 1 to entry: Cf. Annex A.

3.1.5**organic coated steel sheet**

product obtained by factory application of paint by roller or spray processes, or factory applied organic film, on substrates of type Z, type ZA, type AZ or type A coated steel sheet

Note 1 to entry: EN 10169 refers to this type of coated steel.

3.1.6**multilayer coated steel sheet**

product obtained by continuously coating on both sides hot-dip zinc coated cold reduced strips of low carbon steel for cold forming or steel of structural qualities with one or multiple applications of thermoplastic asphalt compounds (minimum thickness 1,5 mm) and subsequent lamination of a metal foil with or without decorative painting

Note 1 to entry: Cf. Annex B.

3.1.7**fully supported**

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

3.2 Symbols and abbreviated terms

- Z Hot-dip zinc coated steel
- ZA Hot-dip zinc/aluminium coated steel
- AZ Hot-dip aluminium/zinc coated steel
- A Hot-dip aluminium coated steel
- ML Multilayer coated steel
- AY Acrylic paint coating
- SP Polyester paint coating
- SP-SI Silicone-modified polyester paint coating
- PVDF Polyvinylidene fluoride paint coating
- PVF(F) Polyvinyl fluoride-film coating
- PVC(P) Polyvinylchloride (plastisol)-coating, applied by coil coating process.
- PUR Polyurethane paint coating
- SP-PA Polyamid-modified polyester paint coating

EXAMPLES

- Z275 PVDF PVDF paint coating, applied to steel sheet with hot-dip zinc coating. Nominal zinc coating mass 275 g/m² total both sides.
- Z275 Hot-dip zinc coating, nominal coating mass 275 g/m² total both sides.
- ZA255 Hot-dip 5% Al-Zn alloy-coating, nominal coating mass 255 g/m² total both sides.
- AZ185 Hot-dip 55% Al-Zn alloy-coating, nominal coating mass 185 g/m² total both sides.

4 Requirements

4.1 General

The product shall be manufactured from materials complying with 4.2.

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 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 Clause 2.

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

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

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