

SLOVENSKI STANDARD

SIST EN 508-1:2008

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Nadomešča:
SIST EN 508-1:2002

Pločevina za pokrivanje streh - Specifikacije za samonosilne proizvode iz jeklene, aluminijeve pločevine ali pločevine iz nerjavnega jekla - 1. del: Jeklo

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

Dachdeckungsprodukte aus Metallblech - Festlegungen für selbsttragende Bedachungselemente aus Stahlblech, Aluminiumblech oder nichtrostendem Stahlblech - Teil 1: Stahl

Produits de couverture en tôle métallique - Spécification pour les plaques de couverture en tôle d'acier, d'aluminium ou d'acier inoxydable - Partie 1 : Acier

Ta slovenski standard je istoveten z: EN 508-1:2008

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91.060.20	Strehe	Roofs

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EUROPEAN STANDARD
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EN 508-1

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English Version

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

Produits de couverture en tôle métallique - Spécification
pour les plaques de couverture en tôles d'acier,
d'aluminium ou d'acier inoxydable - Partie 1 : Acier

Dachdeckungsprodukte aus Metallblech - Festlegungen für
selbsttragende Bedachungselemente aus Stahlblech,
Aluminiumblech oder nichtrostendem Stahlblech - Teil 1:
Stahl

This European Standard was approved by CEN on 30 May 2008.

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COMITÉ EUROPÉEN DE NORMALISATION
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Contents

Page

Foreword.....	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions, symbols and abbreviations.....	6
3.1 General.....	7
3.2 Materials	7
3.3 Profile definitions.....	8
3.4 Product geometry	10
3.5 Symbols and abbreviations	13
4 Requirements	14
4.1 General.....	14
4.2 Materials	15
4.2.1 Materials for roll formed and brake pressed profiles.....	15
4.2.2 Materials for tiles	15
4.2.3 Nominal metallic coating.....	15
4.2.4 Organic coatings.....	16
4.3 Products	17
4.3.1 Mechanical resistance.....	17
4.3.2 Calculation and test of mechanical resistance.....	17
4.3.3 Dimensions.....	17
4.3.4 Dimensional tolerances for the profiled sheets.....	17
4.3.5 Safety in case of fire.....	17
5 Test methods.....	18
5.1 Material properties.....	18
5.2 Structural properties	18
6 Designation	18
7 Marking, labelling and packaging	18
7.1 Marking and labelling.....	18
7.2 Packaging and special ordering conditions	19
7.3 Transport, storage and handling.....	19
Annex A (informative) Aluminium coated steel sheet (type A).....	20
A.1 General.....	20
A.2 Specification for roof covering products	20
A.2.1 Steel grades.....	20
A.2.2 Coating mass	20
A.2.3 Dimensional tolerances	21
Annex B (normative) Multilayer coated steel sheet.....	22
B.1 General.....	22
B.2 Substrate material.....	22
B.3 Specific requirements	22
B.3.1 Minimum nominal values of thickness.....	22
B.3.2 Bituminous coating specification	22
B.3.3 Durability	23
B.4 Freedom from defects	23
Annex C (informative) Metallic coatings	24

Annex D (normative) Dimensional tolerances	27
D.1 Tolerances for trapezoidal sheets	27
D.1.1 General	27
D.1.2 Depth of profile	27
D.1.3 Depth of stiffeners	28
D.1.4 Pitch	28
D.1.5 Widths of crown and valley	29
D.1.6 Cover width	29
D.1.7 Radius of bends	30
D.1.8 Deviation from straightness	31
D.1.9 Deviation from squareness	31
D.1.10 Length	32
D.1.11 Deviation of side lap	33
D.1.12 Curve radius and angles	33
D.2 Tolerances for sinusoidal profiles	34
D.3 Tolerances on tiles	34
D.3.1 General	34
D.3.2 Depth of tile	35
D.3.3 Web angular displacement (Figure D.12)	36
D.3.4 Pitch	36
D.3.5 Width of crown and valley (Figure D.14)	36
D.3.6 Cover width	37
D.3.7 Radius of bends	37
D.3.8 Deviation from straightness	38
D.3.9 Deviation from squareness	39
D.3.10 Length	39
D.3.11 Contraction or bulging	39
D.4 Methods for measuring profiles	40
D.4.1 General	40
D.4.2 Depth of profile	40
D.4.3 Depth of stiffeners	41
D.4.4 Pitch	41
D.4.5 Width of crown and valley	42
D.4.6 Cover width	42
D.4.7 Radius of bends	42
D.4.8 Straightness	42
D.4.9 Squareness	42
D.4.10 Length	43
D.4.11 Side laps	43
D.4.12 Side lap ripple	43
Annex E (informative) Test methods for concentrated load	45
Bibliography	46

EN 508-1:2008 (E)

Foreword

This document (EN 508-1:2008) 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 January 2009, and conflicting national standards shall be withdrawn at the latest by January 2009.

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 supersedes EN 508-1:2000.

EN 508 *Roofing products from metal sheet - Specification for self-supporting products of steel, aluminium or stainless steel sheet* consists of the following parts:

- *Part 1: Steel;*
- *Part 2: Aluminium;*
- *Part 3: Stainless steel.*

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

Introduction

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

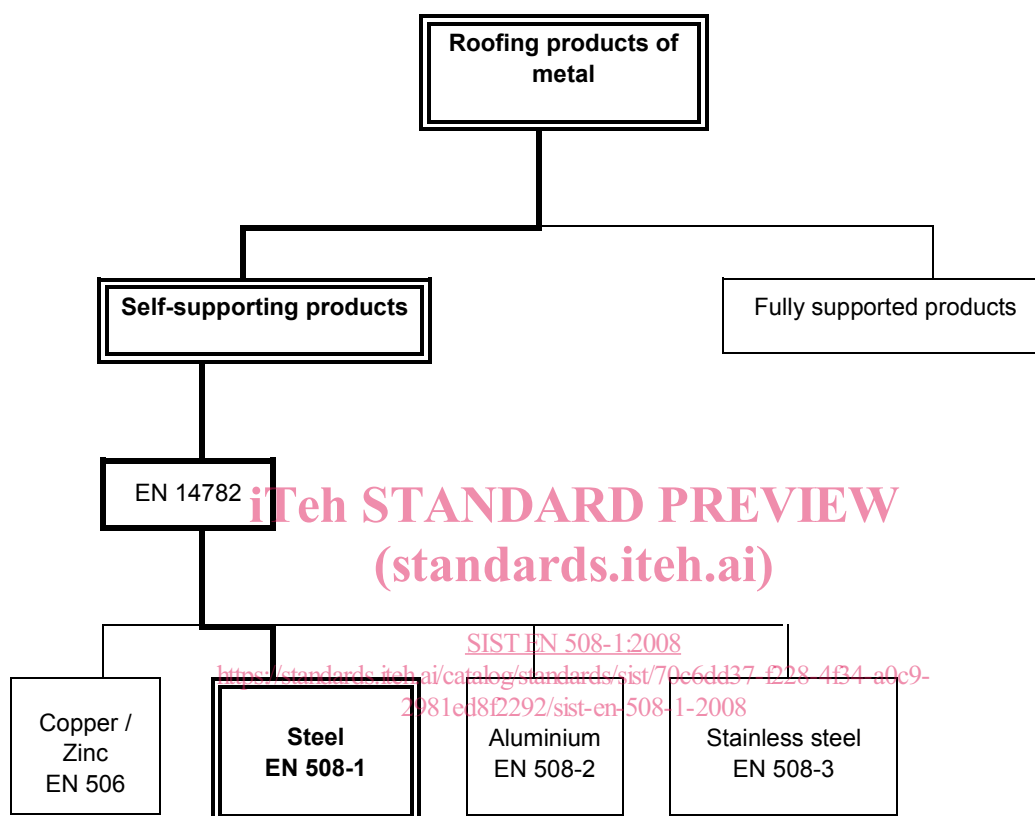


Figure 1 — Framework of standards

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

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

EN 508-1:2008 (E)**1 Scope**

This Part of EN 508 specifies requirements for self-supporting roofing products for discontinuous laying made from metallic coated steel sheet with or without additional organic coatings.

The standard establishes general characteristics, definitions, classifications 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 when purchased before they are despatched from the factory. It specifies the requirements for products which enable them to meet all normal service conditions.

The standard applies to all discontinuously laid self-supporting external profiled sheets for roofing with the exception of tiles with a surface area less than 1 m² and produced by stamping. These profiled roof sheets are designed to keep wind, rain and snow out of the building and to transfer any resultant loads and infrequent maintenance loads to the structure.

No requirements for supporting construction, design of roof system and execution of connections and flashings are included.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

EN 10169-1:2003, *Continuously organic coated (coil coated) steel flat products - Part 1: General information (definitions, materials, tolerances, test methods)*

EN 10169-2, *Continuously organic coated (coil coated) steel flat products - Part 2: Products for building exterior applications*

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

EN 10326, *Continuously hot-dip coated strip and sheet of structural steels - Technical delivery conditions*

EN 10327, *Continuously hot-dip coated strip and sheet of low carbon steels for cold forming - Technical delivery conditions*

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

EN ISO 6988, *Metallic and other non-organic coatings - Sulfur dioxide test with general condensation of moisture (ISO 6988:1985)*

EN ISO 9227, *Corrosion tests in artificial atmospheres - Salt spray tests (ISO 9227:2006)*

3 Terms and definitions, symbols and abbreviations

For the purposes of this standard, the terms and definitions given in EN 10169-1 and the following apply.

3.1 General

3.1.1

Self-supporting product

Product which will, by virtue of its material and shape, support all applied loadings (e.g. snow, wind, foot traffic), and transmit these loadings to spaced structural supports

3.2 Materials

3.2.1

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 or steel of structural quality

NOTE 1 For steel of structurally quality, see EN 10326; for low carbon steel for cold forming, see EN 10327.

NOTE 2 A new standard (prEN10346) that will merge EN 10326 and EN 10327 is currently in preparation.

3.2.2

hot-dip 5 % Al-Zn coated steel sheet (type ZA)

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 zinc and approximately 5 % aluminium (nominal percentage by mass)

NOTE 1 For steel of structurally quality, see EN 10326; for low carbon steel for cold forming, see EN 10327.

NOTE 2 A new standard (prEN10346) that will merge EN 10326 and EN 10327 is currently in preparation.

3.2.3

hot-dip 55 % Al-Zn 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);
- 1,6 % silicon (nominal percentage by mass);
- and the balance zinc

NOTE 1 For steel of structurally quality, see EN 10326; for low carbon steel for cold forming, see EN 10327.

NOTE 2 A new standard (prEN10346) that will merge EN 10326 and EN 10327 is currently in preparation.

3.2.4

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 steel or steel of structural quality on a production line

NOTE See Annex A.

3.2.5

organic coated steel sheet

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

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

NOTE 2 A new standard (prEN 10169) that will merge EN 10169-1, -2 and -3 is currently in preparation.

EN 508-1:2008 (E)

3.2.6

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 quality 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 See Annex B.

3.3 Profile definitions

3.3.1

trapezoidal profiled sheet

self-supporting sheet which is designed to allow it to be side and end lapped, the crowns of which may be rounded and, in addition, the crowns, webs and valleys may be stiffened

NOTE See Figures 2 to 5.

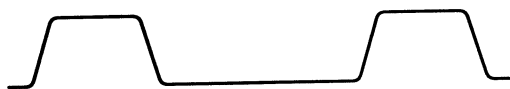


Figure 2 — Part of typical trapezoidal profile



Figure 3 — Part of typical trapezoidal profile with rounded crowns

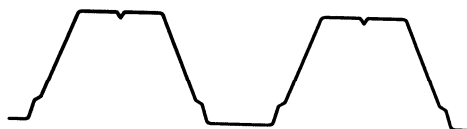


Figure 4 — Part of typical trapezoidal profile with stiffened crown and web



Figure 5 — Part of typical trapezoidal profile with stiffened valley

3.3.2**sinusoidal profiled sheet**

self-supporting sheet which is designed to allow it to be side and end lapped, comprising a series of arc shaped crowns and valleys interconnected with tangential webs

NOTE See Figure 6.



Figure 6 — Part of typical sinusoidal profiled sheet

3.3.3**standing seam and concealed fix sheet**

self-supporting sheet profiled in such a way that the fixings are hidden within the construction and are not exposed to the weather

NOTE 1 The profile shape is designed to allow the formation of side laps on site.

NOTE 2 As these types of roof covering products are used in proprietary roofing systems, no structural requirements are given within this Part of EN 508.

NOTE 3 See Figures 7 and 8.

NOTE 4 These products are normally designed by testing.

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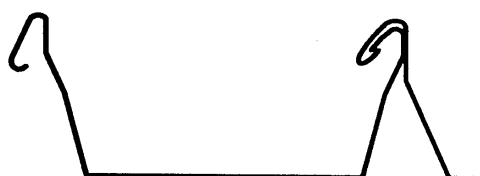


Figure 7 — Typical standing seam profile

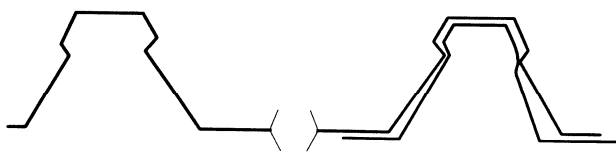


Figure 8 — Typical concealed fix profile

3.3.4**tile profiles**

parts of typical tile profiled sheets that can allow the sheet to be side and/or end lapped

EN 508-1:2008 (E)

NOTE 1 The tile profile may include transverse steps.

NOTE 2 As these types of roof covering products are used in proprietary systems no structural requirements are given within this Part of EN 508.

NOTE 3 See figures 9a, 9b and 9c.

NOTE 4 These products are normally designed by testing.

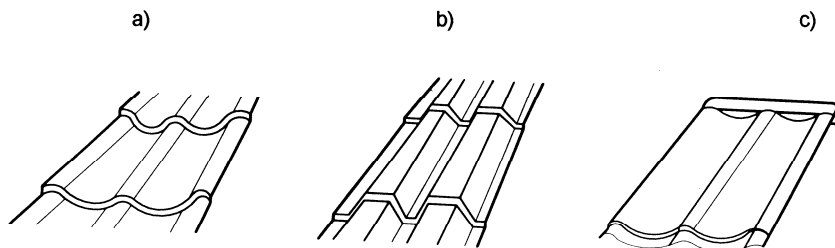
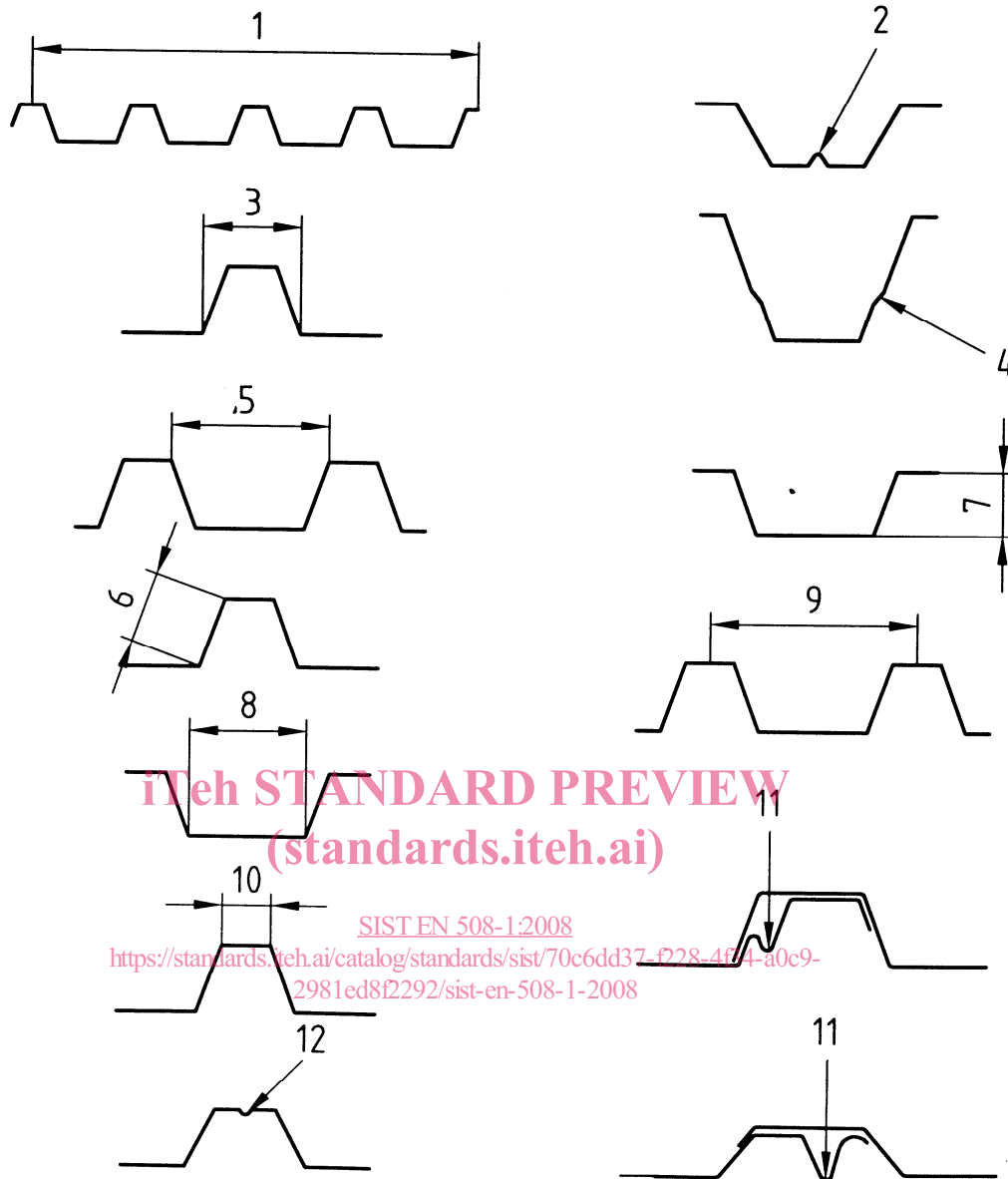


Figure 9 — Typical tile profiles

3.4 Product geometry

NOTE The names for various parts of typical trapezoidal profiled sheets are given in Figures 10a and 10b, with additional definitions for sinusoidal profiles in Figure 11 and tile profiles in Figure 12.

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**Key**

1	Cover width	7	Depth
2	Valley stiffener	8	Valley
3	Rib	9	Pitch
4	Web stiffener	10	Crown
5	Trough	11	Drainage groove
6	Web	12	Crown stiffener

a) Definitions of the parts of typical trapezoidal profiled sheets