



SLOVENSKI STANDARD

SIST EN 508-1:2014

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Nadomešča:
SIST EN 508-1:2008

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

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

Dachdeckungs- und Wandbekleidungsprodukte aus Metallblech - Spezifikation für selbsttragende Dachdeckungsprodukte aus Stahlblech, Aluminiumblech oder nichtrostendem Stahlblech - Teil 1: Stahl

SIST EN 508-1:2014

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

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91.060.20	Strehe	Roofs

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EUROPEAN STANDARD

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

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

Dachdeckungs- und Wandbekleidungsprodukte aus
Metallblech - Spezifikation für selbsttragende
Dachdeckungsprodukte aus Stahlblech, Aluminiumblech
oder nichtrostendem Stahlblech - Teil 1: Stahl

This European Standard was approved by CEN on 1 March 2014.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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EN 508-1:2014 (E)**Foreword**

This document (EN 508-1:2014) 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of an identical text or by endorsement, at the latest by November 2014 and conflicting national standards shall be withdrawn at the latest by November 2014.

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 508-1:2008.

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*

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, 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.

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Introduction

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

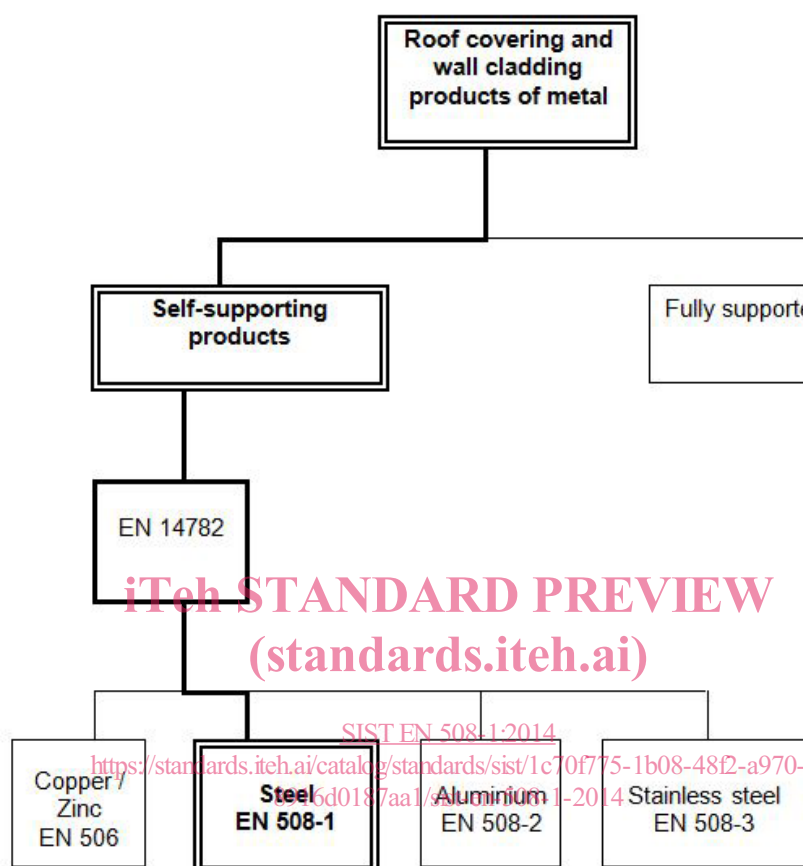


Figure 1 — Framework of standards

In this European 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 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.

EN 508-1:2014 (E)**1 Scope**

This part of EN 508 specifies requirements for self-supporting roofing, covering, wall cladding, lining, liner trays and tiles products for discontinuous laying made from metallic coated steel sheet with or without additional organic coatings. Sheets intended to be used with insulation and membranes are also covered.

This European 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.

This European Standard applies to all discontinuously laid self-supporting external profiled sheets for roofing covering, wall cladding, lining and liner trays with the exception of tiles with a surface area less than 1 m² and produced by stamping. These profiled 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.

This European Standard does not cover products for structural purposes, i.e. it does cover products used in constructions of Class III (according to EN 1993-1-3), it does not cover products used in constructions of Classes I and II (according to EN 1993-1-3) intended to contribute to the global or partial stability of the building structure by providing racking resistance or resistance to permanent static loads (excluding self-weight of the metal sheet).

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

2 Normative references

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

EN 10169:2010+A1:2012, *Continuously organic coated (coil coated) steel flat products - Technical delivery conditions*

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

EN 14782, *Self-supporting metal sheet for roofing, external cladding and internal lining - Product specification and requirements*

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 and abbreviations

For the purposes of this document, the terms and definitions given in EN 10169:2010+A1:2012 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, insulation, membrane) 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 to entry: For steel of structural quality, see EN 10346.

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 to entry: For steel of structural quality, see EN 10346.

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 to entry: For steel of structural quality, see EN 10346.

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

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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 1 to entry: 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 1 to entry: See Figures 2 to 5.

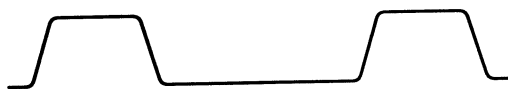


Figure 2 — Part of typical trapezoidal profile



Figure 3 — Part of typical trapezoidal profile with rounded crowns

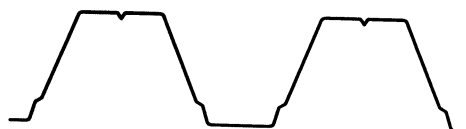


Figure 4 — Part of typical trapezoidal profile with stiffened crown and web



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

Note 2 to entry: As these types of roof covering products are used in proprietary roofing or cladding systems, no structural requirements are given within this part of EN 508.

Note 3 to entry: See Figures 7 and 8.

Note 4 to entry: These products are normally designed by testing.



Figure 7 — Typical standing seam profile

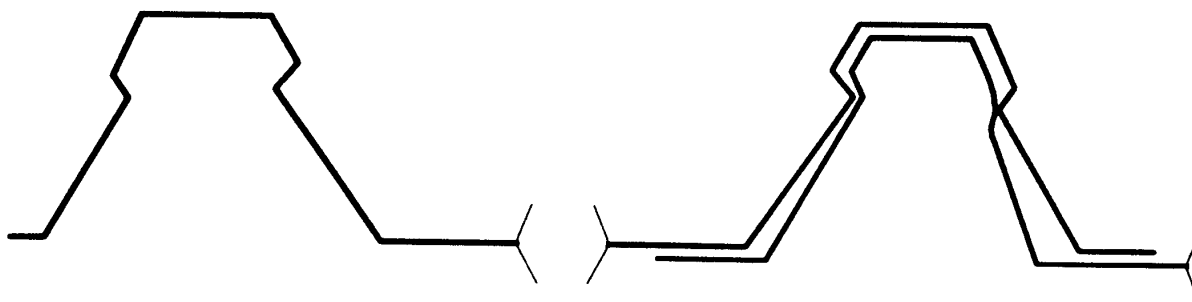


Figure 8 — Typical concealed fix profile

3.3.4 tile profiles

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

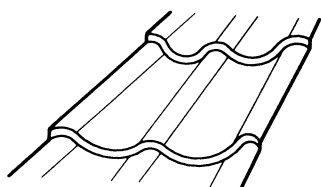
Note 1 to entry: The tile profile may include transverse steps.

Note 2 to entry: As these types of roof covering or cladding products are used in proprietary systems no structural requirements are given within this part of EN 508.

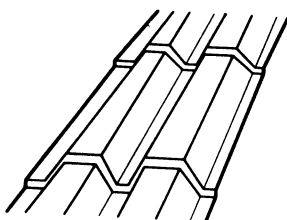
Note 3 to entry: See Figure 9 a), b) and c).

Note 4 to entry: These products are normally designed by testing.

a)



b)



c)

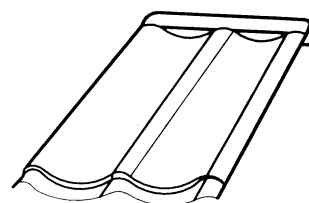
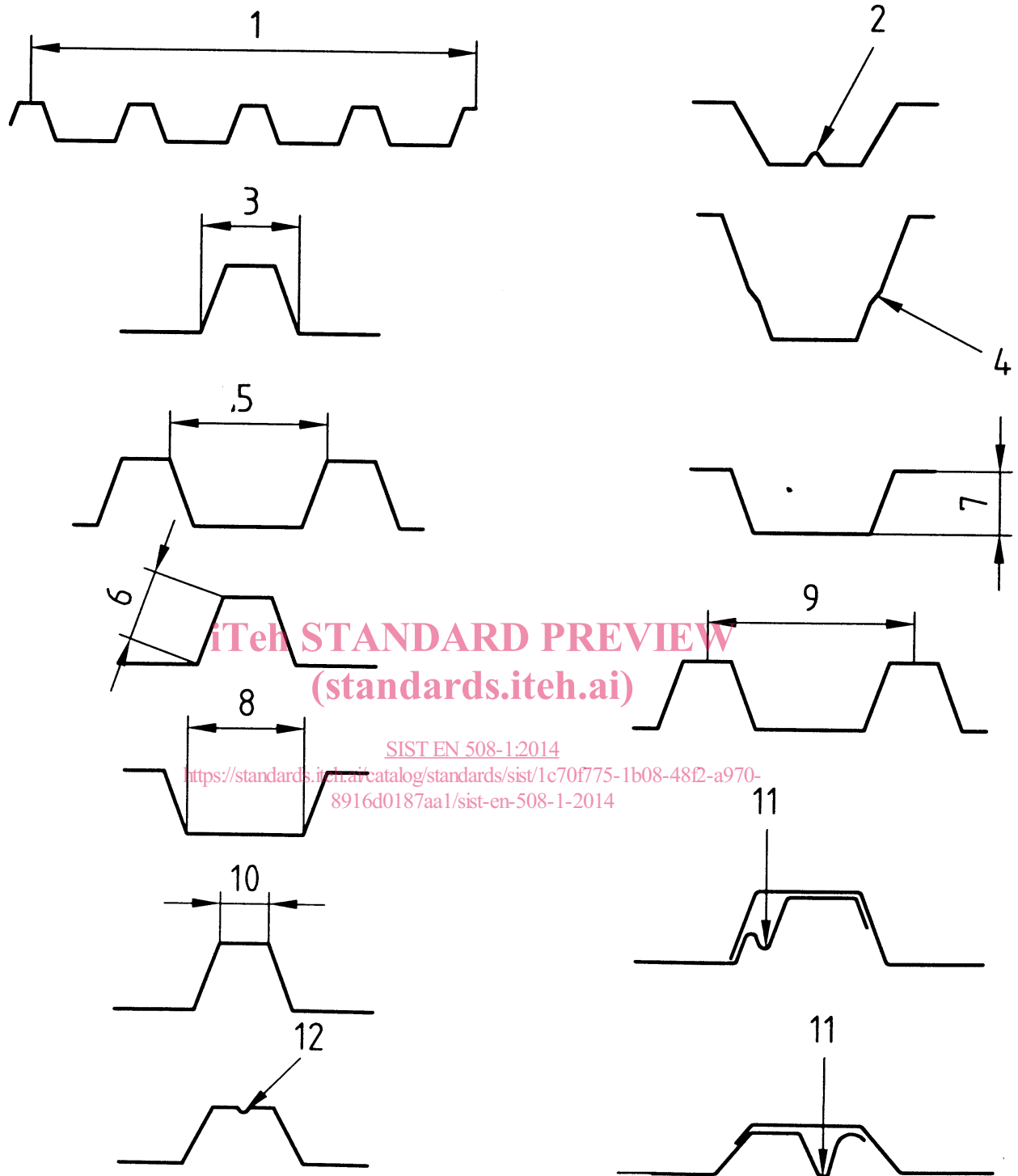


Figure 9 — Typical tile profiles

3.4 Product geometry

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

**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