

SLOVENSKI STANDARD
oSIST prEN 508-2:2017
01-junij-2017

Pločevina za pokrivanje streh - Specifikacija za samonosilne proizvode iz jeklene, aluminijeve pločevine ali pločevine iz nerjavnega jekla - 2. del: Aluminij

Roofing and cladding products from metal sheet - Specification for self-supporting products of steel, aluminium or stainless steel sheet - Part 2: Aluminium

Dachdeckungs- und Wandbekleidungselemente aus Metallblech - Spezifikation für selbsttragende Bedachungselemente aus Stahlblech, Aluminiumblech oder nichtrostende Stahlblech - Teil 2: Aluminium

Produits de couverture et bardage en tôle métallique - Spécification pour les produits autoportants en tôle d'acier, d'aluminium ou d'acier inoxydable - Partie 2 : Aluminium

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**Roofing and cladding products from metal sheet -
Specification for self-supporting products of steel,
aluminium or stainless steel sheet - Part 2: Aluminium**

Produits de couverture et bardages en tôle métallique -
Spécification pour les plaques de couverture en tôle
d'acier, d'aluminium ou d'acier inoxydable - Partie 2 :
Aluminium

Dachdeckungs- und Wandbekleidungselemente aus
Metallblech - Spezifikation für selbsttragende
Bedachungselemente aus Stahlblech, Aluminiumblech
oder nichtrostende Stahlblech - Teil 2: Aluminium

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 128.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

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

This document is currently submitted to the CEN Enquiry.

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*.

This document supersedes EN 508-2:2008.

In comparison with EN 508-2:2008 the following sections have been changed or added: Clause 1; Clause 2; 3.1.1; 3.2.6; 4.2.1; 4.2.3; 4.3.1; 4.3.5; 4.3.5.2; 4.3.5.3; 5.3; Clause 6 and the Bibliography.

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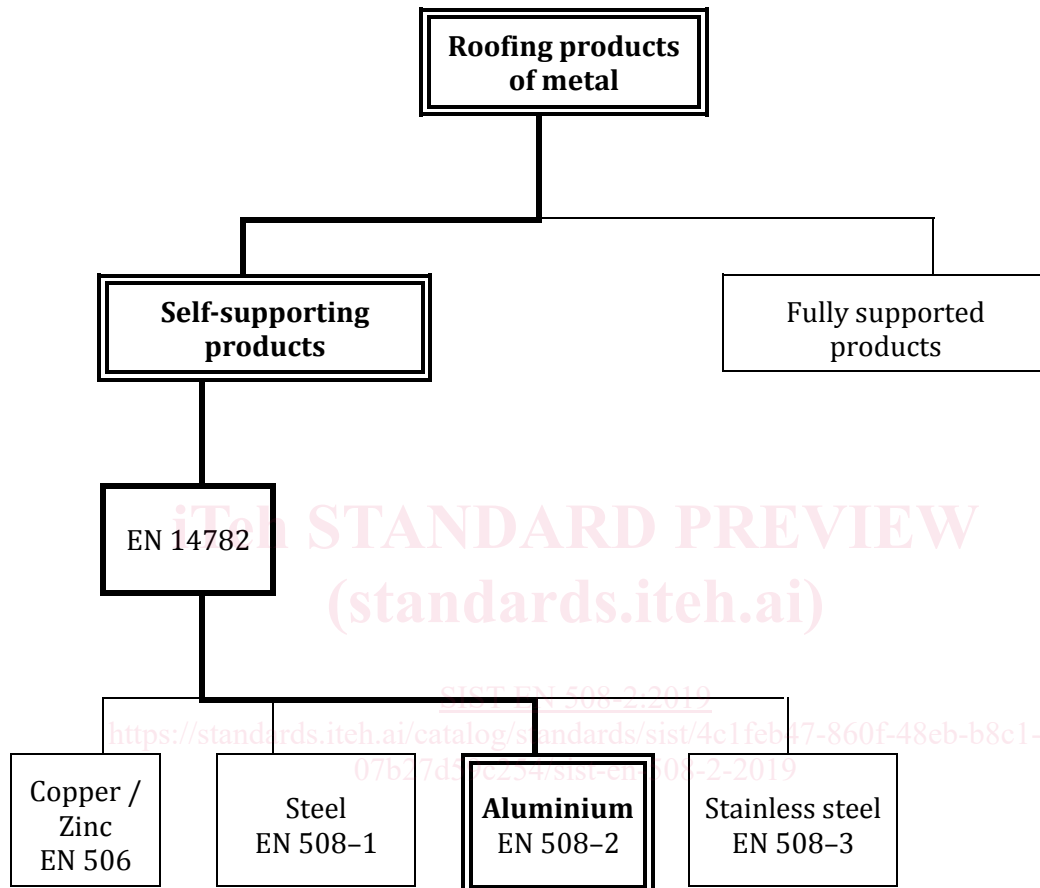
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Introduction

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

Table 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.

1 Scope

This part of EN 508 specifies requirements for self-supporting external profiled sheets for roof covering wall cladding, lining and liner tray products for discontinuous laying made from aluminium sheet with or without surface treatment (additional organic coatings or anodising).

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 before they are made available on the market before being 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 roof 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 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.

This standard does not cover products for structural purposes, i.e. it does not cover products used in structural class III (according to EN 1999-1-4), it does not cover products used in constructions of Structural Classes I and II (according to EN 1999-1-4) intended to contribute to the global or partial stability of the building structure by providing racking resistance or resistance of permanent static loads (excluding self-weight of the metal sheet).

No requirements for supporting construction, design of roof 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 485-4, *Aluminium and aluminium alloys - Sheet, strip and plate - Part 4: Tolerances on shape and dimensions for cold-rolled products*

EN 1396, *Aluminium and aluminium alloys - Coil coated sheet and strip for general applications - Specifications*

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

EN ISO 7599, *Anodizing of aluminium and its alloys - General specifications for anodic oxidation coatings on aluminium (ISO 7599)*

3 Terms and definitions, symbols and abbreviations

For the purposes of this document, the following terms and definitions 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 Material definitions

3.2.1

aluminium

unalloyed aluminium or aluminium

3.2.2

unalloyed aluminium

metal with a minimum content of 99,0% by mass of aluminium and with content by mass of any other element within the limits of:

- a total content of iron and silicon not greater than 1,0 %;
- a content of any other element not greater than 0,10 % except for copper which can have a content of up to 0,20 % provided that neither the chromium nor the manganese content exceeds 0,05 %

3.2.3

aluminium alloy

alloy in which aluminium predominates by mass overreach of the other elements and which is not covered by the definition of unalloyed aluminium

3.2.4

temper

material conditions after a production stage, for example mechanical treatment and/or heat treatment, intended to give the material physical and/or metallurgical properties

3.2.5

organic coated aluminium sheet

painted, post coated, laminated or coil coated (continuously organic coated) aluminium on one or on both sides

3.2.6

anodized aluminium sheet

aluminium with an anodic coating, produced by an electrolytic oxidation process in which the surface of the aluminium is converted to a mainly oxide coating having protective, decorative or functional properties

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, web and valley may be stiffened

Note 1 to entry: See Figures 1, 2, 3 and 4.



Figure 1 — Part of typical trapezoidal profile



Figure 2 — Part of typical trapezoidal profile with rounded crowns

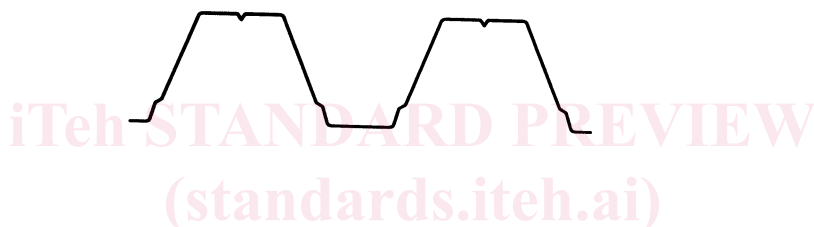


Figure 3 — Part of typical trapezoidal profile with stiffened crown and web

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Figure 4 — 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 5.



Figure 5 — 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: See Figures 6 and 7.

Note 2 to entry: The profile shape is designed to allow the formation of side laps on site.

Note 3 to entry: As these types of roof covering products are used in proprietary roofing systems, no structural requirements are given within this standard.

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



Figure 6 — Typical standing seam profile

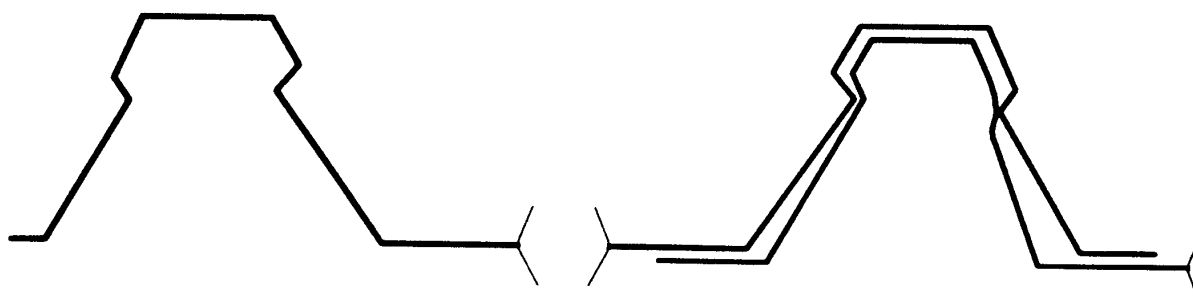


Figure 7 — Typical concealed fix profile

3.3.4

tile profile

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

Note 1 to entry: See Figures 8a, 8b and 8c.

Note 2 to entry: The tile profiles may include transverse steps.

Note 3 to entry: As these types of roof covering products are used in proprietary systems no structural requirements are given within this part of EN 508.

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

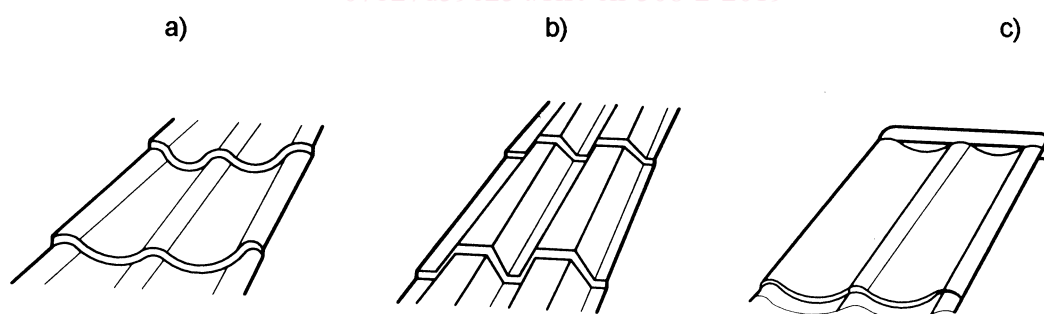


Figure 8 — Typical tile profiles

3.4 Product geometry

NOTE The names for various parts of typical trapezoidal profiled sheets are given in Figure 9, Figure 10 with additional definitions for sinusoidal profiles in Figure 11 and tile profiles in Figure 12.