

**ISEKANDVAD KAHEPOOLSETE KATTEPLEKKIDEGA
SÄNDVITŠPANEELID. TÖÖSTUSLIKULT VALMISTATUD
TOOTED. SPETSIFIKATSIOONID**

**Self-supporting double skin metal faced insulating
panels - Factory made products - Specifications**

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

See Eesti standard EVS-EN 14509:2013 sisaldab Euroopa standardi EN 14509:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 14509:2013 consists of the English text of the European standard EN 14509:2013.
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English Version

Self-supporting double skin metal faced insulating panels - Factory made products - Specifications

Panneaux sandwichs autoportants, isolants, double peau
à parements métalliques - Produits manufacturés -
Spécifications

Selbsttragende Sandwich-Elemente mit beidseitigen
Metaldeckschichten - Werkmäßig hergestellte Produkte -
Spezifikationen

This European Standard was approved by CEN on 18 July 2013.

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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 14509:2013) 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of an identical text or by endorsement, at the latest by April 2014, and conflicting national standards shall be withdrawn at the latest by October 2014.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 14509:2006.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

Annex F provides details of significant technical changes between this European Standard and the previous edition.

Data obtained from earlier tests in accordance to EN 14509:2006 may be used without the need for further testing to the revised procedures (6.2.2) providing the declared data does not change significantly.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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.

1 Scope

This European Standard specifies requirements for factory made, self-supporting, double skin metal faced insulating sandwich panels, which are intended for discontinuous laying in the following applications:

- a) roofs and roof cladding;
- b) external walls and wall cladding;
- c) walls (including partitions) and ceilings within the building envelope.

The insulating core materials covered by this European Standard are rigid polyurethane, expanded polystyrene, extruded polystyrene foam, phenolic foam, cellular glass and mineral wool.

NOTE Polyurethane (PUR) includes polyisocyanurate (PIR).

Panels with edge details that utilise different materials from the main insulating core are included in this European Standard.

Panels used in cold store applications are included in this European Standard. Panels, put on the market as a component of a cold storage room, building and/or building envelope kit are covered by ETA-Guideline 021 "Cold storage premises kits".

This European Standard does not cover the following:

- i. sandwich panels with a declared thermal conductivity for the insulating core greater than 0,06 W/m·K at 10 °C;
- ii. products consisting of two or more clearly defined layers of different insulating core materials (multi-layered);
- iii. panels with perforated facing(s);
- iv. curved panels.

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 485-2, *Aluminium and aluminium alloys - Sheet, strip and plate - Part 2: Mechanical properties*

EN 485-4, *Aluminium and aluminium alloys - Sheet, strip and plate - Part 4: Tolerances on shape and dimensions for cold-rolled products*

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

EN 826, *Thermal insulating products for building applications - Determination of compression behaviour*

EN 1172, *Copper and copper alloys - Sheet and strip for building purposes*

CEN/TS 1187, *Test methods for external fire exposure to roofs*

- EN 1363-1, *Fire resistance tests - Part 1: General Requirements*
- EN 1364-1, *Fire resistance tests for non-loadbearing elements - Part 1: Walls*
- EN 1364-2, *Fire resistance tests for non-loadbearing elements - Part 2: Ceilings*
- EN 1365-2, *Fire resistance tests for loadbearing elements - Part 2: Floors and roofs*
- EN 1396, *Aluminium and aluminium alloys - Coil coated sheet and strip for general applications - Specifications*
- EN 1602, *Thermal insulating products for building applications - Determination of the apparent density*
- EN 1607, *Thermal insulating products for building applications - Determination of tensile strength perpendicular to faces*
- EN 1990, *Eurocode - Basis of structural design*
- EN 10088-1, *Stainless steels - Part 1: List of stainless steels*
- EN 10143, *Continuously hot-dip 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 10346:2009, *Continuously hot-dip coated steel flat products - Technical delivery conditions*
- EN 12085, *Thermal insulating products for building applications - Determination of linear dimensions of test specimens*
- EN 12114, *Thermal performance of buildings - Air permeability of building components and building elements - Laboratory test method*
- EN 12865, *Hygrothermal performance of building components and building elements - Determination of the resistance of external wall systems to driving rain under pulsating air pressure*
- EN 13162, *Thermal insulation products for buildings - Factory made mineral wool (MW) products - Specification*
- EN 13163, *Thermal insulation products for buildings - Factory made expanded polystyrene (EPS) products - Specification*
- EN 13164, *Thermal insulation products for buildings - Factory made extruded polystyrene foam (XPS) products - Specification*
- EN 13165, *Thermal insulation products for buildings - Factory made rigid polyurethane foam (PU) products - Specification*
- EN 13166, *Thermal insulation products for buildings - Factory made phenolic foam (PF) products - Specification*
- EN 13167, *Thermal insulation products for buildings - Factory made cellular glass (CG) products - Specification*
- CEN/TS 13381-1, *Test methods for determining the contribution to the fire resistance of structural members - Part 1: Horizontal protective membranes*

- ENV 13381-2, *Test methods for determining the contribution to the fire resistance of structural members - Part 2: Vertical protective membranes*
- EN 13501-1, *Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests*
- EN 13501-2, *Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services*
- EN 13501-5, *Fire classification of construction products and building elements - Part 5: Classification using data from external fire exposure to roofs tests*
- EN 13823, *Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item*
- EN 14135, *Coverings - Determination of fire protection ability*
- EN 15254-5, *Extended application of results from fire resistance tests - Non-loadbearing walls - Part 5: Metal sandwich panel construction*
- EN ISO 354:2003, *Acoustics - Measurement of sound absorption in a reverberation room (ISO 354)*
- EN ISO 717-1, *Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation (ISO 717-1)*
- EN ISO 1182, *Reaction to fire tests for products - Non-combustibility test (ISO 1182)*
- EN ISO 1716, *Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value) (ISO 1716)*
- EN ISO 6270-1, *Paints and varnishes - Determination of resistance to humidity - Part 1: Continuous condensation (ISO 6270-1)*
- EN ISO 6892-1, *Metallic materials - Tensile testing - Part 1: Method of test at room temperature (ISO 6892-1)*
- EN ISO 6946, *Building components and building elements - Thermal resistance and thermal transmittance - Calculation method (ISO 6946)*
- EN ISO 9445 (all parts), *Continuously cold-rolled stainless steel - Tolerances on dimensions and form (ISO 9445)*
- EN ISO 10140 (all parts), *Acoustics - Laboratory measurement of sound insulation of building elements (ISO 10140)*
- EN ISO 10211, *Thermal bridges in building construction - Heat flows and surface temperatures - Part 1: Detailed calculations (ISO 10211)*
- EN ISO 10456, *Building materials and products - Hygrothermal properties - Tabulated design values and procedures for determining declared and design thermal values (ISO 10456)*
- EN ISO 11654, *Acoustics - Sound absorbers for use in buildings - Rating of sound absorption (ISO 11654)*
- EN ISO 11925-2, *Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test (ISO 11925-2)*
- ISO 12491, *Statistical methods for quality control of building materials and components*