



SLOVENSKI STANDARD
SIST EN 13964:2004/A1:2007

01-marec-2007

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Suspended ceilings - Requirements and test methods

Unterdecken - Anforderungen und Prüfverfahren

Plafonds suspendus - Exigences et méthodes d'essai

Ta slovenski standard je istoveten z: **EN 13964:2004/A1:2006**

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ICS:

91.060.30 Stropi. Tla. Stopnice Ceilings. Floors. Stairs

SIST EN 13964:2004/A1:2007 **en**

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ICS 91.060.30

English Version

Suspended ceilings - Requirements and test methods

Plafonds suspendus - Exigences et méthodes d'essai

Unterdecken - Anforderungen und Prüfverfahren

This amendment A1 modifies the European Standard EN 13964:2004; it was approved by CEN on 12 October 2006.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, 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 United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 13964:2004/A1:2006) has been prepared by Technical Committee CEN/TC 277 "Suspended ceilings", the secretariat of which is held by IBN/BIN.

This Amendment to the European Standard EN 13964:2004 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2007, and conflicting national standards shall be withdrawn at the latest by August 2008.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard : Austria, Belgium, 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 United Kingdom.

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1 Scope

Replace the current Scope with new one:

This European Standard covers membranes, individual substructure components, substructure kits and suspended ceiling kits when these are placed on the market. This European Standard also gives certain specifications for the installed suspended ceiling system, for two reasons: the individual components and kits may have to meet certain requirements in order for the installed system to be able to meet the requirement when the system is installed, and because it is appropriate, for ease of reference, to give both component/kit requirement and installed system requirement in the same document, given the relationship between them.

This European Standard provides information for the various parties responsible for designing, manufacturing and specifying/selecting suspended ceilings used for interior applications in general building and civil engineering structures. It covers suspended ceilings sold as a complete kit, substructures sold as kits, individual components (products) of such substructures, and membrane components. It includes test methods and methods of assessment, as well as provisions for the evaluation of conformity of the products to the requirements of this European Standard.

In the absence of any other European Standard, this European Standard specifies dimensions, tolerances and, where relevant, performance requirements, for commonly available ceiling substructures and membrane components.

This European Standard does not cover the following:

- ceiling substructures and membrane component covered by other harmonised European Standards, for in-situ formed ceilings, covered by other European technical specifications, for which it is the installer, not the component manufacturer, who takes responsibility for ensuring that the complete installed suspended ceiling meets any regulatory requirements to which it is subject;
- stretched ceilings covered by EN 14716;
- ceilings in mobile buildings, caravans and other forms of transportation;
- characteristics needed for special applications, for which additional characteristics other than covered by this European Standard would need to be complied with;
- ceilings subject to water penetration requirements;
- ceilings used externally where requirements other than covered by this scope would apply (tunnels, canopies, petrol stations, arcades, open sports facilities, car parks etc.);
- heavy duty suspended ceilings or their supporting construction (e.g. ceilings that can be walked on);
- ceilings made from fire protective boards covered by ETAG 018-4.

This European Standards covers the following essential characteristics:

- reaction to fire;
- resistance to fire (suspended ceiling kits only);
- release of asbestos (content) (suspended ceiling kits and membrane components only);
- release of formaldehyde (suspended ceiling kits and membrane components only);
- shatter properties (for membrane components of brittle materials in suspended ceiling kits only);

- flexural tensile strength;
- load bearing capacity;
- electrical safety;
- direct airborne sound insulation (suspended ceiling kits only);
- sound absorption (suspended ceiling kits and membrane components only);
- thermal conductivity (suspended ceiling kits and membrane components only);
- durability of flexural tensile strength and load bearing capacity against moisture;
- condensation.

This European Standard also covers the following non-essential requirements:

- colour and light reflectance;
- installation.

2 Normative references

Replace the current main paragraph with new one:

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.

Delete all full stops at the end of the references.

Replace references of prEN standards with references to EN standards:

EN 520, *Gypsum plasterboards — Definitions, requirements and test methods*

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

EN 14190, *Gypsum plasterboard products from reprocessing — Definitions, requirements and test methods*

EN 14195, *Metal framing components for gypsum plasterboard systems — Definitions, requirements and test methods*

Replace references of ENV standards with references to EN standards:

EN 1991-1-4¹⁾, *Eurocode 1: Actions on structures — Part 1-4: General actions — Wind actions*

EN 1993-1-1²⁾, *Eurocode 3: Design of steel structures — Part 1-1: General rules and rules for buildings*

¹⁾ Superseded ENV 1991-2-4 in 2005.

²⁾ Superseded ENV 1993-1-1 in 2005.

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EN 1995-1-1³⁾, *Eurocode 5: Design of timber structures — Part 1-1: General — Common rules and rules for buildings*

EN 1998-1⁴⁾, *Eurocode 8: Design of structures for earthquake resistance — Part 1: General rules, seismic actions and rules for buildings*

Add new normative references:

EN 14716, *Stretched ceilings — Requirements and test methods*

ETAG 018-4, *Fire Protective Products — Part 4: Fire Protective board, slab and mat products and kits*

Delete normative references to:

EN 10142, *Continuously hot dip zinc coated low carbon steel strip and sheet for cold forming — Technical delivery conditions*

EN 10214, *Continuously hot dip zinc-aluminium (ZA) coated steel strip and sheet — Technical delivery conditions*

EN 10215, *Continuously hot dip aluminium-zinc (AZ) coated steel strip and sheet — Technical delivery conditions*

Replace “ENV 717-1” by “EN 717-1”.

Add “2003” after “EN ISO 354:”.

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4 Classification, designation and coding

[SIST EN 13964:2004/A1:2007](#)

4.2 Modular dimensions

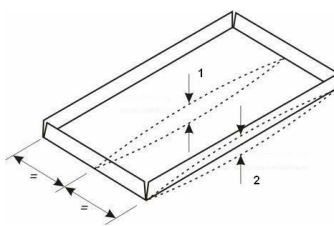
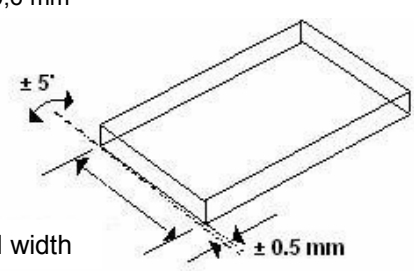
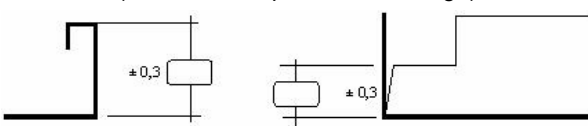
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Replace the current Table 4 with a new one:

³⁾ Superseded ENV 1995-1-1 in 2004.

⁴⁾ Superseded ENV 1998-1-3 in 2004.

Table 4 — Tolerances of thin gauge membrane components^a

a. Panel sizes:						
- for lengths $\geq 1\ 000$ mm			0 -0,4 mm / m			
- for lengths $< 1\ 000$ mm			0 -0,5 mm			
- for width			0 -0,4 mm			
b. Flatness:						
						
Key						
1 tolerance b						
2 tolerance a						
l = length (mm)	0 < l ≤ 1 000		1 000 < l ≤ 2 000		2 000 < l ≤ 3 000	
b = width (mm)	a	b	a	b	a	b
0 < b ≤ 400	- 0,5 +0,5	- 0,2 +3,0	- 0,5 +1,5	- 0,2 +4,0	- 0,5 +3,0	- 0,2 +6,0
400 < b ≤ 500	0,5 +0,5	- 0 +4,0	- 0,5 +1,5	0 +5,0	- 0,5 +3,5	0 +7,0
500 < b ≤ 625	- 0,5 +0,5	- 0 +6,0	- 0,5 +1,5	- 0 +7,0	- 0,5 +4,0	- 0 +9,0
625 < b ≤ 1 250	- 0,5 +0,5	- 0 +10,0	- 0,5 +1,5	- 0 +13,0	-	-
c. Angularity of the long edge in relation to short edge						
Panel width up to 625 mm ± 0,5 mm						
Panel width 625 mm to 1 250 mm ± 0,6 mm						
						
d. Depth of stops / supports ± 0,3 mm (measured on panel cut out edge)						
						
<div style="display: flex; justify-content: space-around; width: 100%;"> Edge Cut-out edge </div>						
Deviations from 90° angle on vertical upstand are dependent on the production process and the relative suspension systems. There are no fixed tolerances.						
^a The tolerances are valid for unperforated thin gauge membrane components and for perforated thin gauge membrane components with a hole diameter of maximum 4 mm and maximum 25 % open area.						