



KOMO[®] attest

Installed in a building

SKH

Visiting address:
'Het Cambium', Nieuwe Kanaal 9c, 6709 PA Wageningen, The Netherlands
Postal address:
PO Box 159, 6700 AD Wageningen, the Netherlands
Telephone: +31 (0)317 45 34 25 Email: mail@skh.org
Fax: +31 (0)317 41 26 10 Website: http://www.skh.org

**APPLICATIONS OF
SUSPENDED CEILINGS**

Number: 20785/15 PDF
Issued: 01/12/2015
Valid until: 03/13/2020
Replaces: 20785/15 (13/03/2015)

Attest holder

Faay Vianen B.V.
Mijlweg 3
4131 PJ VIANEN
PO Box 116
4130 EC VIANEN
Tel.: +31 (0)347 37 66 24
Fax: +31 (0)347 37 79 40
Email: info@faay.nl
Website: http://www.faay.nl

Declaration by SKH

This attest was issued on the basis of AD 4511 'Suspended ceilings' dated 15.08.2003, including amendment sheet dated 07.09.2015, in accordance with the SKH Regulations for Certification.

The performance of applications of suspended ceilings has been assessed in relation to the Building Decree and the principles of the assessment are reassessed periodically.

Based on this, SKH declares that:

The applications of suspended ceilings provide the performance as included in this attest and the applications for suspended ceilings meet the Building Decree requirements included in this attest, provided that:

- o the technical specification and application conditions defined in this attest are met;
- o the production of the application of suspended ceilings takes place in accordance with the conditions and/or processing methods stipulated in this attest.

In the context of this attest, no inspection occurs of the site of manufacture of the suspended ceilings or of the composition and/or installation in the applications of suspended ceilings.

This attest is a recognised quality declaration for the 2012 Building Decree, in accordance with the 2015 tripartite agreement (Government Gazette 8987, 2015) and the Housing Act. The attest is included in the 'Overzicht van erkende kwaliteitsverklaringen in de bouw' (Overview of recognised quality declarations in the construction industry) on the website of SBK, the Building Quality Foundation: www.bouwkwiteit.nl.

On behalf of SKH

H.J.O. van Doorn, Director

Furthermore, this attest is included in the overview on the website of the KOMO Foundation: <http://www.komo.nl>.

Those who apply this attest are advised to check whether this certificate is still valid; please consult the SKH website for this: <http://www.skh.org>.

This attest consists of 7 pages.



Building Decree

The following has been assessed:
One-off performance in the application
Reassessment every 5

APPLICATIONS OF SUSPENDED CEILINGS

1. TECHNICAL SPECIFICATION

1.1 Subject

This attest concerns the performance of applications of suspended ceilings. The suspended ceilings are composed of rectangular elements that are connected to each other by means of I-profiles, intended for use in:

- new development residential units;
- new development non-residential buildings;
- renovated residential units;
- renovated non-residential buildings.

1.2 Specification of Product Properties

The statements in this attest for applications of suspended ceilings are valid providing the suspended ceilings meet the conditions below:

Property	Determination method	AD requirement
Load-bearing capacity*	NEN-EN 13964 Sections 4.3.2, 4.3.3 and 4.3.4	No requirement
Limiting the development of fire and smoke	NEN-EN 13501-1	Fire class at least D and smoke class at least s2
Fire resistance*	NEN-EN 13501-2	Fire resistance \geq 60 minutes
Acoustic properties (from outside)*	NEN-EN-ISO 140-3 NEN-EN-ISO 717-1	\geq 20 dB
Sound absorption*	NEN-EN 12354-6	The total sound absorption with a numerical value, expressed in m ² , shall not be less than 1/6 of the numerical value of the volume of the space, expressed in m ³ , in each of the octave bands with central frequencies of 250, 500, 1,000 and 2,000 Hz.
Watertightness*	NEN 2778	No requirement
Restriction on the use of harmful materials*	NEN-EN 13964 Section 4.5	No requirement
Thermal resistance*	NEN-EN-ISO 6946 NEN-EN-ISO 10211-1	No requirement

* = optional

APPLICATIONS OF SUSPENDED CEILINGS

2 PERFORMANCE IN THE APPLICATION

2.1 PERFORMANCE BASED ON THE BUILDING DECREE

BUILDING DECREE ENTRY (ONLY FOR STRUCTURAL APPLICATIONS)

No.	Section	Limiting value/method of determination	Performance in accordance with attest
2.1	General strength*	Maximum limiting condition of structure, calculation in accordance with the appropriate Eurocodes and/or NEN standards	Not investigated
2.2	Strength in the event of fire*	Fire resistance with respect to the collapse of building structures according to the applicable Eurocodes or NEN 6069	Not investigated
2.9	Reducing fire and smoke development	Inside surface	smoke class at least s2 and fire class at least D
		Structural element	N/A
2.10	Limitation of propagation of fire*	WBDBO	Notification of implementation examples with notification of contribution to the WBDBO
2.11	Further limitation of fire propagation and distribution of smoke*	WBDBO	
2.12	Escape routes*	Escape route layout	Notification of contribution to the WBDBO
3.1	Protection against sound from outside*	Characteristic sound insulation ≥ 20 dB(A) according to NEN 5077	Notification of implementation examples that meet the requirements
3.3	Limiting reverberation*	Sound absorption $\geq 1/8$ numerical value of volume of space	Notification of implementation examples with contribution to sound absorption
3.4	Sound insulation between rooms*	Typical airborne sound level difference ≥ 47 dB according to NEN 5077	Notification of conditions and implementation examples that meet the requirements
		Weighted contact sound level for sound transfer ≤ 59 dB according to NEN 5077	Notification of conditions and implementation examples that meet the requirements
3.5	Exclusion of moisture*	Watertight according to NEN 2778	Not investigated
		Factor of the temperature, inside surface ≥ 0.50 according to NEN 2778	Notification of implementation examples with accompanying factor of the temperature
3.9	Restriction of the presence of harmful substances and ionising radiation*	In accordance with regulations of ministerial decree	No mention of performance
5.1	Energy efficiency*	Thermal resistance ≥ 6.0 m ² .K/W according to NEN 1068	No mention of performance

* = optional

APPLICATIONS OF SUSPENDED CEILINGS

2.2 PERFORMANCE FROM A SAFETY VIEWPOINT

GENERAL STRENGTH; BD Section 2.1

2.2.1 Strength of the building structure; BD Articles 2.2, 2.3 and 2.4

The strength of the suspended ceilings has not been investigated. The responsibility with respect to the load-bearing structure does not generally lie with the manufacturer.

STRENGTH IN CASE OF FIRE; BD Section 2.2

2.2.2 Strength in case of fire; BD Article 2.10 and BD Article 2.11

The fire-resistance duration with respect to the collapse of building structures of which a suspended ceiling is part, determined in accordance with NEN-EN 1995-1-2 or NEN 6069, has not been investigated.

LIMITING THE DEVELOPMENT OF FIRE AND SMOKE; BD Section 2.9

2.2.3 Inside surface; BD Article 2.67

In the application bordering on the indoor air in structural elements (such as ceilings), BD Article 2.67 distinguishes between 'extra-protected escape route', 'protected escape route' and 'other':
The types GP 22 VO incl. rock wool and FR19 VO incl. rock wool can be used in the applications shown below.

In an extra-protected escape route

The suspended ceiling may not be used bordering on the indoor air in structural elements (such as ceilings).

In a protected escape route

The suspended ceiling may be used bordering on the indoor air in structural elements (such as ceilings) in the following use functions:

- Other residential function
- Other meeting function
- Other healthcare function
- Other industrial function
- Office function
- Educational function
- Sports function
- Retail function
- Other usage function

In other applications

The suspended ceiling may be used bordering on the indoor air in structural elements (such as ceilings) in the following use functions:

- Residential function
- Meeting function
- Healthcare function
- Other industrial function
- Office function
- Accommodation function
- Educational function
- Sports function
- Retail function
- Other usage function

2.2.4 Structural element; BD Article 2.72

Due to the lack of Ministerial Regulations, no statements are made in this attest about limiting the development of fire and smoke in a structural element.

APPLICATIONS OF SUSPENDED CEILINGS

LIMITATION OF PROPAGATION OF FIRE; BD Section 2.10

2.2.5 Resistance to fire penetration and flashover; BD Article 2.84

The implementation examples below of partition structures (of which the suspended ceiling is part) are in the context of the resistance to fire penetration and flashover suitable for a partition between a fire compartment and:

- another fire compartment;
- an enclosed space through which an extra-protected escape route runs;
- an unenclosed safety escape route;
- a lift shaft of a fire service lift.

Implementation examples

Types GP22 VO incl. rock wool and FR19 VO incl. rock wool, incl. 65 mm, rock wool under wooden floor, meet the requirements above.

FURTHER LIMITATION OF FIRE PROPAGATION AND LIMITATION OF SMOKE DISTRIBUTION; BD Section 2.11

2.2.6 WBDBO; BD Article 2.94

The implementation examples below of partition structures (of which the suspended ceiling is part) are suitable for a partition in the context of the resistance to fire penetration and flashover between a protected sub-fire compartment and another room in the fire compartment.

Implementation examples

Types GP22 VO incl. rock wool and FR19 VO incl. rock wool, incl. 65 mm, rock wool under wooden floor, meet the requirements above.

ESCAPE ROUTES; BD Section 2.12

2.2.7 Design of escape routes; BD Article 2.107

The implementation examples below of partition structures (of which the suspended ceiling is part) are suitable for a partition in the context of resistance to fire penetration and flashover, if a second escape route starts on an escape route between the different rooms through which these two escape routes lead and between an enclosed room through which a protected or extra-protected escape route leads, and the connecting rooms in the direction of escape.

Implementation examples

Types GP22 VO incl. rock wool and FR19 VO incl. rock wool, incl. 65 mm, rock wool under wooden floor, meet the requirements above.

2.3. PERFORMANCE FROM A HEALTH VIEWPOINT

PROTECTION AGAINST SOUND FROM OUTSIDE; BD Section 3.1

2.3.1 Characteristic sound insulation (sound from outside); BD Article 3.2

The characteristic sound insulation of the implementation examples below of an external partition structure (of which the suspended ceiling is part) should be at least 20 dB, determined in accordance with NEN 5077.

Implementation examples

The types GP22 VO, incl. rock wool (including 65 mm, rock wool under wooden floor) and FR19 VO incl. rock wool (incl. 65 mm rock wool under stone type floor), meet the requirements above.

APPLICATIONS OF SUSPENDED CEILINGS

RESTRICTION OF REVERBERATION; BD Section 3.3

2.3.2 **Sound absorption; BD article 3.13**

The total sound absorption determined according to NEN-EN 12354-6 with a numerical value, expressed in m², of an enclosed common traffic zone for access to a residential function in a residential building that borders on a non-common zone of a residential function, is not less than 1/6 of the numerical value of the volume of that zone, expressed in m³, in each of the octave bands with central frequencies of 250, 500, 1,000 and 2,000 Hz.

Implementation examples

The types GP22 VO, incl. rock wool (including 65 mm, rock wool under wooden floor) and FR19 VO incl. rock wool (incl. 65 mm rock wool under stone type floor), meet the requirements above.

SOUND INSULATION BETWEEN SPACES; BD Section 3.4

2.3.3 **Characteristic air-noise level difference and weighted contact-noise level (different user functions on the same plot); BD Article 3.17**

- the characteristic air-sound level difference for the sound transfer from a habitable space to another habitable space of an adjoining residential function on the same plot, determined according to NEN 5077, complies with Article 3.17;

- the weighted contact sound level for sound transfer from a habitable space to another habitable space of an adjoining residential function on the same plot, determined according to NEN 5077, complies with Article 3.17.

2.3.4 **Characteristic air-noise level difference and weighted contact-noise level (habitable spaces of same residential function); BD Article 3.17a**

- the characteristic air-sound level difference for the sound transfer from a habitable space to another habitable space of the same residential function, determined according to NEN 5077, complies with Article 3.17a;

- the characteristic air-sound level difference for the sound transfer from a habitable space to another habitable space of the same residential function, determined according to NEN 5077, complies with Article 3.17a.

EXCLUSION OF MOISTURE; BD Section 3.5

2.3.5 **Exclusion of moisture from outside; BD Article 3.21**

It has not been demonstrated that the Faay suspended ceiling, when constructing the partition structures (of which the suspended ceiling is part), is watertight.

2.3.6 **Factor of the temperature; BD Article 3.22**

The implementation examples below of external partition structures (of which the suspended ceiling is part) meet the requirements for the factor of the temperature of the inside surface of external partition structures, determined in accordance with NEN 2778, for all buildings and uses / for all buildings with the exception of those with a residential function.

Implementation examples

The connections of the ceiling, see the details in the technical documentation no. 5, from January 2003 edition meet the requirements with respect to the temperature factor.

REDUCING THE PRESENCE OF HARMFUL SUBSTANCES AND IONIZING RADIATION;
BD Section 3.9

2.3.7 **Ministerial Regulations; BD Article 3.63**

Due to the lack of relevant Ministerial Regulations, no statements are made.

APPLICATIONS OF SUSPENDED CEILINGS

2.4 PERFORMANCE FROM THE VIEWPOINT OF ENERGY EFFICIENCY

ENERGY EFFICIENCY; BD Section 5.1

2.4.1 Thermal insulation: BD Article 5.3

It has not been demonstrated that the Faay suspended ceiling, when constructing the partition structures (of which the suspended ceiling is part), meet the requirements for thermal resistance, determined in accordance with NEN 1068.

3 TIPS FOR THE USER

3.1 On delivery of the suspended ceiling, check that:

- the suspended ceiling meets the specification and application conditions included in this attest;
- what has been delivered corresponds with what has been agreed;
- the products do not show any visible defects as a result of transport, etc;
- processing and/or maintenance instructions are available.

If the products are rejected on the grounds of any of the above, please contact:

Faay Vianen B.V.

and, if necessary:

the certification body SKH
Office building 'Het Cambium',
Nieuwe Kanaal 9c, 6709 PA Wageningen, the Netherlands
PO Box 159, 6700 AD Wageningen, The Netherlands
Telephone: +31 (0)317 45 34 25 Email: mail@skh.org
Fax: +31 (0)317 41 26 10 Website: <http://www.skh.org>

3.2 Attest

The manufacturer is required to ensure that the purchaser has a copy of the complete attest at its disposal at the workplace.

3.3 Application and use

Transport, storage and processing are to be carried out in accordance with the conditions included in this attest.

3.4 Validity check

Check whether the attest is still valid; consult the SKH website: <http://www.skh.org>.