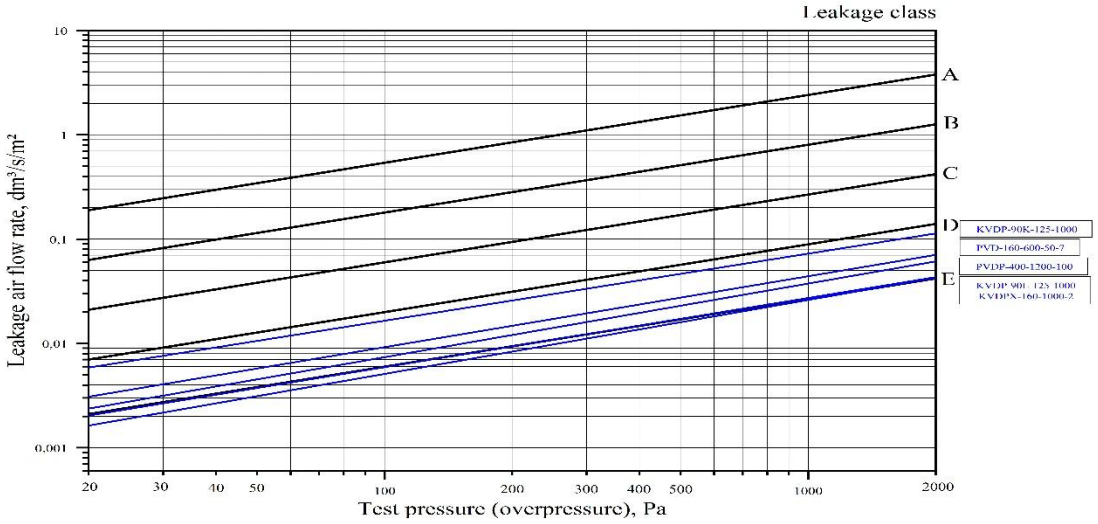
PRODUCT CERTIFICATE

Lindab Group/Oy Lindab Ab

Manufacures

Ventilation silencers

The ventilation silencers KVDPX, KVDP90L, KVDP90K, PVD, and PVDP are intended for use in the ventilation and air-conditioning duct systems of buildings. The sound attenuation performance, pressure loss, airtightness, strength, dimensions, as well as the materials and cleanliness of the ventilation silencers comply with the requirements of the certification criteria SERT R090: Ventilation Silencers for Buildings. The airtightness classes (EN 15727) of the ventilation silencers KVDPX, KVDP90L, KVDP90K, PVD, and PVDP are presented below:



The ventilation silencers KVDPX, KVDP90L, KVDP90K, PVD, and PVDP comply with the requirements of Airtightness Class D under both positive and negative pressure conditions. The maximum operating pressure is +2000 Pa / -1000 Pa. The product specifications of the certified ventilation silencers are presented on pages 3-8 of the certificate. The certification requirements are presented on page 9.
This certificate is valid until August 11, 2031, on condition that the product is not essentially changed and the manufacturer and Eurofins Expert Services Oy have a valid contract on quality control. To check the validity of this certificate, www.sertifikaattihaku.fi. Other conditions are listed on page 2 of the certificate

Espoo, August 12, 2026

Katja Vahtikari
Manager, Construction Certification

Jouni Hietanen
Senior Expert

Tämä dokumentti on allekirjoitettu sähköisesti

PRODUCT CERTIFICATE

For the certificate to be valid, the following provisions must be met:

Where reference is made in this certificate to any regulations, publications, standards or other documents, it shall be construed as a reference to such publication in the form of which it is in force at the date of this certificate. If the Ministry of the Interior does renew requirements for products during the validity of the certificate and the requirements consists essential changes, the validity of the certificate stops the latest at the end of the transition period set by the ministry.

The manufacturer is responsible for the quality and continuous quality control of the product. In granting this certificate, Eurofins Expert Services Oy does not accept responsibility to any person or body for any loss or damage incurred in respect of personal injury arising as direct or indirect result of the use of this product.

The use of the name of Eurofins Expert Services Oy or the name Eurofins in any other form in advertising or distribution in part of this certificate is only permissible with written authorisation from Eurofins Expert Services Oy.

This certificate is the English version of the original EUFI29-23003588-C Finnish certificate. In case of dispute the Finnish original of the certificate is valid.

PRODUCT CERTIFICATE

Product Information for Ventilation Silencers Used in Building
Models**:** Duct silencers KVDPX, KVDP90L, KVDP90K, PVD, and PVDP, with duct connection sizes ranging from 100 mm to 1000 mm. The rectangular silencer KVDPX is available in both a fixed and an access- door (openable) version

Manufacturer**:** Lindab Finland (Oy Lindab Ab) Juvan teollisuuskatu 3, FI-02920 Espoo, Finland
Tel. +358 20 785 1010 Email: info.finland@lindab.com

Manufacturing Locations:: Espoo, Jyväskylä, Tallinn (Estonia), Grevie (Sweden) ja Karlovarska (Czechia).

Main Manufacturing Materials: Casing: galvanized steel. Sound-attenuating material: polyester fiber

Instructions**:** Technical product information, as well as installation, transportation, and maintenance instructions, shall be supplied with the product when required

Certified Ventilation Silencers:

1. Rectangular silencers with circular connections, featuring Acutec® Plus polyester fiber insulation (KVDPX-aaa-bbbb-1), OKVDPX-aaa-bbbb-1 ONNLINE, A-COLL xxx-xxx-KVDPX-1 ACUTEC

aaa = connection diameter, mm
bbbb = length of the silencer section, mm
1 = Acutec® Plus polyester fiber insulation

No	Product	Mass, kg		No	Product	Mass, kg
1	KVDPX-100-300-1	1,9		15	KVDPX-315-600-1	9,7
2	KVDPX-100-600-1	3,5		16	KVDPX-315-1000-1	13,8
3	KVDPX-100-1000-1	4,7		17	KVDPX-400-600-1	15,4
4	KVDPX-125-300-1	2,3		18	KVDPX-400-1000-1	22,8
5	KVDPX-125-600-1	4,3		19	KVDPX-400-1250-1	27,1
6	KVDPX-125-1000-1	5,9		20	KVDPX-500-600-1	22,0
7	KVDPX-160-300-1	3,2		21	KVDPX-500-1000-1	25,8
8	KVDPX-160-600-1	5,9		22	KVDPX-500-1250-1	30,1
9	KVDPX-160-1000-1	7,4		23	KVDPX-630-600-1	24,5
10	KVDPX-200-300-1	4,3		24	KVDPX-630-1000-1	36,5
11	KVDPX-200-600-1	6,9		25	KVDPX-630-1250-1	42,5
12	KVDPX-200-1000-1	8,8		26	KVDPX-800-600-1	39,3
13	KVDPX-250-600-1	8,5		27	KVDPX-800-1000-1	58,5
14	KVDPX-250-1000-1	12,2		28	KVDPX-800-1250-1	68,1

PRODUCT CERTIFICATE

2. Rectangular silencer with circular connections, openable version, Acutec® Plus polyester fiber insulation (KVDPX-aaa-bbbb-2)

aaa = connection diameter, mm
bbbb = length of the silencer section, mm
2 = Acutec® Plus polyester fiber insulation, openable version

No	Product	Mass, kg		No	Product	Mass, kg
1	KVDPX-100-300-2	2,1		15	KVDPX-315-600-2	10,7
2	KVDPX-100-600-2	4,1		16	KVDPX-315-1000-2	14,9
3	KVDPX-100-1000-2	5,4		17	KVDPX-400-600-2	15,8
4	KVDPX-125-300-2	2,5		18	KVDPX-400-1000-2	22,2
5	KVDPX-125-600-2	4,9		19	KVDPX-400-1250-2	27,8
6	KVDPX-125-1000-2	6,4		20	KVDPX-500-600-2	23,4
7	KVDPX-160-300-2	3,0		21	KVDPX-500-1000-2	26,6
8	KVDPX-160-600-2	6,5		22	KVDPX-500-1250-2	31,3
9	KVDPX-160-1000-2	8,2		23	KVDPX-630-600-2	25,0
10	KVDPX-200-300-2	4,6		24	KVDPX-630-1000-2	37,3
11	KVDPX-200-600-2	7,7		25	KVDPX-630-1250-2	43,5
12	KVDPX-200-1000-2	9,8		26	KVDPX-800-600-2	39,9
13	KVDPX-250-600-2	9,5		27	KVDPX-800-1000-2	59,3
14	KVDPX-250-1000-2	13,2		28	KVDPX-800-1250-2	69,0

3. Rectangular silencer with circular connections, Acutec® polyester fiber insulation (KVDPX-aaa-bbbb-3)

aaa = connection diameter, mm
bbbb = length of the silencer section, mm
3 = Acutec® sound-attenuating material

No	Product	Mass, kg		No	Product	Mass, kg
1	KVDPX-100-300-3	1,8		15	KVDPX-315-600-3	9,2
2	KVDPX-100-600-3	3,3		16	KVDPX-315-1000-3	12,9
3	KVDPX-100-1000-3	4,3		17	KVDPX-400-600-3	14,4
4	KVDPX-125-300-3	2,2		18	KVDPX-400-1000-3	21,1
5	KVDPX-125-600-3	3,8		19	KVDPX-400-1250-3	25,7
6	KVDPX-125-1000-3	5,2		20	KVDPX-500-600-3	21,0
7	KVDPX-160-300-3	3,6		21	KVDPX-500-1000-3	22,6
8	KVDPX-160-600-3	5,6		22	KVDPX-500-1250-3	26,2
9	KVDPX-160-1000-3	6,8		23	KVDPX-630-600-3	22,1
10	KVDPX-200-300-3	4,1		24	KVDPX-630-1000-3	32,3
11	KVDPX-200-600-3	6,3		25	KVDPX-630-1250-3	37,4
12	KVDPX-200-1000-3	7,8		26	KVDPX-800-600-3	36,0
13	KVDPX-250-600-3	8,0		27	KVDPX-800-1000-3	53,3
14	KVDPX-250-1000-3	11,7		28	KVDPX-800-1250-3	61,9

PRODUCT CERTIFICATE

4. Rectangular silencer with circular connections, openable version, Acutec® polyester fiber insulation (KVDPX-aaa-bbbb-4)

aaa = connection diameter, mm
bbbb = length of the silencer section, mm
4 = Acutec® sound-attenuating material, openable version

No	Product	Mass, kg		No	Product	Mass, kg
1	KVDPX-100-300-4	2,0		15	KVDPX-315-600-4	10,2
2	KVDPX-100-600-4	3,9		16	KVDPX-315-1000-4	14,0
3	KVDPX-100-1000-4	5,0		17	KVDPX-400-600-4	14,8
4	KVDPX-125-300-4	2,4		18	KVDPX-400-1000-4	21,7
5	KVDPX-125-600-4	4,4		19	KVDPX-400-1250-4	26,4
6	KVDPX-125-1000-4	5,9		20	KVDPX-500-600-4	21,5
7	KVDPX-160-300-4	2,8		21	KVDPX-500-1000-4	24,4
8	KVDPX-160-600-4	6,2		22	KVDPX-500-1250-4	27,1
9	KVDPX-160-1000-4	7,4		23	KVDPX-630-600-4	22,6
10	KVDPX-200-300-4	4,4		24	KVDPX-630-1000-4	33,1
11	KVDPX-200-600-4	7,1		25	KVDPX-630-1250-4	38,4
12	KVDPX-200-1000-4	8,8		26	KVDPX-800-600-4	36,6
13	KVDPX-250-600-4	9,0		27	KVDPX-800-1000-4	54,1
14	KVDPX-250-1000-4	12,7		28	KVDPX-800-1250-4	62,9

5. Rectangular silencer with circular connections, corner model, Acutec® polyester fiber insulation (KVDP90L-aaa-bbbb)

6. Rectangular silencer with circular connections, corner model, Acutec® polyester fiber insulation (KVDP90K-aaa-bbbb)

aaa = connection diameter, mm
bbbb = length of the silencer section, mm
L = corner model, connection on the wider side
K = corner model, connection on the narrower side

No	Product	Mass, kg		No	Product	Mass, kg
1	KVDP90L-100-600	3,6		7	KVDP90K-100-600	3,6
2	KVDP90L-100-1000	5,5		8	KVDP90K-100-1000	5,5
3	KVDP90L-125-600	4,0		9	KVDP90K-125-600	4,0
4	KVDP90L-125-1000	6,0		10	KVDP90K-125-1000	6,0
5	KVDP90L-160-600	5,1		11	KVDP90K-160-600	5,1
6	KVDP90L-160-1000	7,5		12	KVDP90K-160-1000	7,5

PRODUCT CERTIFICATE

7. Circular silencer, Acutec® polyester fiber insulation (PVD-aaa-bbbb-50-1), (A-COLL aaa-bbb POLYESTER), (PVD-aaa-bbb-50 ONNLINE)

aaa = connection diameter, mm
bbbb = length of the silencer section, mm
50 = sound-attenuating material thickness, mm
1 = The surface of the sound-attenuating material is covered with perforated sheet metal

No	Product	Mass, kg		No	Product	Mass, kg
1	PVD-100-300-50-1	1,75		16	PVD-200-1200-50-1	8,68
2	PVD-100-600-50-1	2,81		17	PVD-250-600-50-1	6,24
3	PVD-100-900-50-1	4,19		18	PVD-250-900-50-1	9,00
4	PVD-100-1200-50-1	5,11		19	PVD-250-1200-50-1	10,9
5	PVD-125-300-50-1	2,04		20	PVD-315-600-50-1	8,19
6	PVD-125-600-50-1	3,29		21	PVD-315-900-50-1	11,6
7	PVD-125-900-50-1	4,90		22	PVD-315-1200-50-1	12,7
8	PVD-125-1200-50-1	5,93		23	PVD-400-600-50-1	13,0
9	PVD-160-300-50-1	3,63		24	PVD-400-900-50-1	18,0
10	PVD-160-600-50-1	4,27		25	PVD-400-1200-50-1	22,0
11	PVD-160-900-50-1	6,38		26	PVD-400-1500-50-1	27,0
12	PVD-160-1200-50-1	7,57		27	PVD-500-600-50-1	15,0
13	PVD-200-300-50-1	3,17		28	PVD-500-900-50-1	22,0
14	PVD-200-600-50-1	4,93		29	PVD-500-1200-50-1	27,0
15	PVD-200-900-50-1	7,29		30	PVD-500-1500-50-1	33,0

8. Circular silencer, Acutec® polyester fiber insulation (PVD-aaa-bbbb-50-7), (A-COLL-aaa-bbb-50 POLYESTER), (PVD-aaa-bbb-50 ONNLINE)

aaa = connection diameter, mm
bbbb = length of the silencer section, mm
50 = sound-attenuating material thickness, mm
7 = The sound-attenuating material consists of a one-piece polyester fiber element

No	Product	Mass, kg		No	Product	Mass, kg
1	PVD-100-300-50-7	1,9		8	PVD-160-600-50-7	4,6
2	PVD-100-600-50-7	3,2		9	PVD-160-300-50-7	2,8
3	PVD-100-900-50-7	4,5		10	PVD-200-300-50-7	3,3
4	PVD-125-300-50-7	2,2		11	PVD-200-600-50-7	5,3
5	PVD-125-600-50-7	3,6		12	PVD-200-900-50-7	7,3
6	PVD-125-900-50-7	5,1		13	PVD-250-600-50-7	6,4
7	PVD-160-300-50-7	2,8		14	PVD-250-900-50-7	8,8

PRODUCT CERTIFICATE

9. Circular silencer, Acutec® polyester fiber insulation (PVD-aaa-bbbb-100-1), (A COLL aaa-bbb-100 POLYESTER)

aaa = connection diameter, mm
bbbb = length of the silencer section, mm
100 = sound-attenuating material thickness mm
1 = The surface of the sound-attenuating material is covered with perforated sheet metal

No	Product	Mass, kg		No	Product	Mass, kg
1	PVD-100-300-100-1	3,5		29	PVD-500-1200-100-1	34
2	PVD-100-600-100-1	4,5		30	PVD-500-1500-100-1	41
3	PVD-100-900-100-1	7,6		31	PVD-630-600-100-1	24
4	PVD-100-1200-100-1	9,7		32	PVD-630-900-100-1	32
5	PVD-125-300-100-1	3,8		33	PVD-630-1200-100-1	41
6	PVD-125-600-100-1	6,2		34	PVD-630-1500-100-1	50
7	PVD-125-900-100-1	8,5		35	PVD-710-710-100-1	30
8	PVD-125-1200-100-1	11		36	PVD-710-1000-100-1	42
9	PVD-160-300-100-1	4,4		37	PVD-710-1420-100-1	53
10	PVD-160-600-100-1	7,1		38	PVD-800-800-100-1	36
11	PVD-160-900-100-1	9,7		39	PVD-800-1000-100-1	44
12	PVD-160-1200-100-1	12		40	PVD-800-1200-100-1	51
13	PVD-200-300-100-1	5,2		41	PVD-800-1600-100-1	65
14	PVD-200-600-100-1	8,0		42	PVD-900-900-100-1	44
15	PVD-200-900-100-1	11		43	PVD-900-1500-100-1	62
16	PVD-200-1200-100-1	14		44	PVD-900-1800-100-1	80
17	PVD-250-600-100-1	9,6		45	PVD-1000-1000-100-1	53
18	PVD-250-900-100-1	13		46	PVD-1000-2000-100-1	97
19	PVD-250-1200-100-1	17		47	PVD-1120-1120-100-1	64
20	PVD-315-600-100-1	15		48	PVD-1120-2240-100-1	70
21	PVD-315-900-100-1	19		49	PVD-1250-1250-100-1	98
22	PVD-315-1200-100-1	26		50	PVD-1250-1500-100-1	139
23	PVD-400-600-100-1	16		51	PVD-1250-2500-100-1	180
24	PVD-400-900-100-1	23		52	PVD-1400-1400-100-1	193
25	PVD-400-1200-100-1	28		53	PVD-1400-1500-100-1	251
26	PVD-400-1500-100-1	35		54	PVD-1400-2800-100-1	309
27	PVD-500-600-100-1	20		55	PVD-1600-1600-100-1	272
28	PVD-500-900-100-1	27		56	PVD-1600-3200-100-1	440

PRODUCT CERTIFICATE

10. Circular silencer with a sound-attenuation cartridge, Acutec® polyester fiber insulation (PVDP-aaa-bbbb-50-1)

aaa = connection diameter, mm
bbbb = length of the silencer section, mm
50 = sound-attenuating material thickness, mm
1 = The surface of the sound-attenuating material is covered with perforated sheet metal

No	Product	Mass, kg		No	Product	Mass, kg
1	PVDP-250-600-50-1	7,6		8	PVDP-400-900-50-1	21
2	PVDP-250-900-50-1	10		9	PVDP-400-1200-50-1	27
3	PVDP-250-1200-50-1	13		10	PVDP-400-1500-50-1	33
4	PVDP-315-600-50-1	9,6		11	PVDP-500-600-50-1	20
5	PVDP-315-900-50-1	13		12	PVDP-500-900-50-1	27
6	PVDP-315-1200-50-1	16		13	PVDP-500-1200-50-1	33
7	PVDP-400-600-50-1	15		14	PVDP-500-1500-50-1	41

11. Circular silencer with a sound-attenuation cartridge, Acutec® polyester fiber insulation (PVDP-aaa-bbbb-100-1)

aaa = connection diameter, mm
bbbb = length of the silencer section, mm
100 = sound-attenuating material thickness, mm
1 = The surface of the sound-attenuating material is covered with perforated sheet metal

No	Product	Mass, kg		No	Product	Mass, kg
1	PVDP-250-600-100-1	11		27	PVDP-800-1200-100-1	65
2	PVDP-250-900-100-1	15		28	PVDP-800-1500-100-1	74
3	PVDP-250-1200-100-1	19		29	PVDP-800-1600-100-1	83
4	PVDP-315-600-100-1	17		30	PVDP-800-2000-100-1	93
5	PVDP-315-900-100-1	21		31	PVDP-900-900-100-1	56
6	PVDP-315-1200-100-1	29		32	PVDP-900-1000-100-1	60
7	PVDP-400-600-100-1	19		33	PVDP-900-1200-100-1	70
8	PVDP-400-900-100-1	26		34	PVDP-900-1500-100-1	78
9	PVDP-400-1200-100-1	33		35	PVDP-900-1800-100-1	99
10	PVDP-400-1500-100-1	40		36	PVDP-900-2000-100-1	124
11	PVDP-500-600-100-1	24		37	PVDP-1000-1000-100-1	68
12	PVDP-500-900-100-1	32		38	PVDP-1000-1200-100-1	79
13	PVDP-500-1200-100-1	40		39	PVDP-1000-1500-100-1	95
14	PVDP-500-1500-100-1	49		40	PVDP-1000-2000-100-1	121
15	PVDP-630-600-100-1	31		41	PVDP-1120-1000-100-1	85
16	PVDP-630-900-100-1	40		42	PVDP-1120-1120-100-1	87
17	PVDP-630-1200-100-1	50		43	PVDP-1120-1200-100-1	88
18	PVDP-630-1500-100-1	61		44	PVDP-1120-1500-100-1	93
19	PVDP-710-710-100-1	38		45	PVDP-1120-2000-100-1	101
20	PVDP-710-1000-100-1	52		46	PVDP-1120-2240-100-1	105
21	PVDP-710-1200-100-1	59		47	PVDP-1250-1000-100-1	77
22	PVDP-710-1420-100-1	66		48	PVDP-1250-1250-100-1	126
23	PVDP-710-1500-100-1	69		49	PVDP-1250-1500-100-1	175
24	PVDP-710-2000-100-1	89		50	PVDP-1250-2000-100-1	199
25	PVDP-800-800-100-1	48		51	PVDP-1250-2500-100-1	223
26	PVDP-800-1000-100-1	57				

TUOTESERTIFIKAATTI

Requirements for Certified Ventilation Silencer:

Property	Determination Method	Requirement
Tightness	SFS-EN 12237 (circular), SFS-EN 1507 (rectangular), SFS-EN 13180 (flexible), SFS-EN 15727 and 1751 (other devices) and SFS-EN 14239 (area), and SFS-EN 17192 2)	Regulation 1009/2017, SFS-EN 12237, SFS-EN 1507, SFS-EN 13180 and SFS-EN 15727. Tightness class at least C. Tightness class corresponds to the manufacturer's declaration.
Strenght	SFS-EN 12237 (circular) and SFS-EN 1507 (rectangular) (overpressure 2000 Pa and underpressure 750 Pa), and SFS-EN 17192 2) and SFS-EN 13180 (flexible)	Regulation 1009/2017, SFS-EN 12237, SFS-EN 1507 and SFS-EN 13180. Meets strength requirements. For rectangular duct components, pressure class at least 2 (overpressure 1000 Pa). Result corresponds to manufacturer's declaration..
Dimension	SFS-EN 1506 (circular) and SFS-EN 1505 (rectangular), and SFS-EN 13180 (flexible)	SFS-EN 1506, SFS-EN 1505 and SFS-EN 13180. Mass corresponds to manufacturer's declaration
Nominal thicknesses of the material of the walls of galvanized steel air ducts	Ministry of the Environment Decree on type approval of ventilation silencers. SFS-EN 10143	Circular ducts: ≤ 315 mm ≥ 0.50 mm; 400–800 mm ≥ 0.70 mm; > 800 mm ≥ 0.90 mm. Rectangular ducts: longest side ≤ 300 mm ≥ 0.50 mm; 301–800 mm ≥ 0.70 mm; > 800 mm ≥ 0.90 mm
Mass of the zinc layer on the walls	SFS-EN 10346	SFS-EN 10346 (Z275). Ministry of the Environment Decree on type approval. Minimum 275 g/m²
Pressure loss	ISO 7235	Pressure loss at different airflows or insertion loss coefficient is reported if flow cross-section differs from duct/connection area.
Cleanliness of the inner surface	M1 classification of building materials	M1 requirements: oil ≤ 0.050 g/m² (deep-drawn parts ≤ 0.30 g/m²) or odor > +0.10; released mineral fibers < 0.10 pcs/m³; surface dust < 0.50 g/m²
Cleanability	Assessment, SFS-EN 12097	Withstands 10 cleaning cycles according to manufacturer instructions or is openable for cleaning
Acoustic performance	Ministry of the Environment Decree on type approval. SFS-EN ISO 11691 or 7235	The sound attenuation of the silencer and the flow-generated sound power level shall be reported in octave bands over the frequency range of 63–8000 Hz within the operating range of the silencer. The sound generation of the silencer shall be reported if the flow cross-sectional area of the silencer differs from the cross-sectional area of the duct/connection. Permissible deviations shall comply with SFS-EN ISO 7235..
Instructions	Assessment	Inspection, protection, transport, storage, installation, operation and maintenance instructions do comply
Antistatic properties 2)	IEC 61340-4-10 (withdrawn 30.12.2016)	Can be reported
Chemical emissions 2)	Chemical emissions M1-classification of building materials. SFS-EN 16516:2017 + A1:2020	TVOC < 0.2 mg/m²h Ammonia < 0.03 mg/m²h Formaldehyde < 0.05 mg/m²h Odour ≥ +0.0 Individual VOC ≤ EU-LCI (µg/m³ as a chamber concentration) Emission of CMR compounds[1] < 0.005 mg/m²h (or < 0.001 mg/m³ as a chamber concentration)
Reaction fire 2)	Procedure based on presumed fire development according to Articles 3 and 4 of Decree 848/2017	Can be reported
Heat release and smoke production of the material 2)	ISO 5660	Can be reported
Fire safety of ventilation system components	Ventilation fire safety guide, https://www.talotekniikkainfo.fi	Can be reported