



TECHNICAL DATASHEET

Multifunctional underlay with a ventilation feature for use under laminate and parquet (engineered floor).

Product code: 392119000
Brand name: ProVent™

Structure of material

A combination of low-density LDPE foam sheet with closed-cell structure and a membrane of high-density polyethylene (HDPE) film. The HDPE film is laminated to the LDPE foam by heat. The bottom surface of the polyethylene has multiple ribs that create a system of air channels. The colour of the HDPE film may vary. The material is supplied in rolls and has an HDPE overlap of 20 cm.

Basic principle of operation

The ProVent *micropumping*™ technology makes use of the differences of temperature and pressure in the underfloor area and the room. Due to this difference, humid air is extracted through the air channels and replaced with fresh air. The air exchange in the area between subfloor and ProVent underlay is continuous and is boosted by slight movements of the flooring under footstep pressure while walking. This feature essentially reduces the level of moisture on top of the subfloor and decreases the risk of mould formation. ProVent provides full protection of the flooring against moisture, and no additional vapour barrier is needed.

Main properties:

Material		
Low-density polyethylene foam with a profiled surface and high-density polyethylene film.		
1. Dimensions		
number of ribs per metre	177	±5 %
<i>thickness</i>		
thickness of foam layer	2.3 mm	EN 823 + Annex A to FprCEN/TS 16354:2011
thickness of HDPE film	0.02 mm	
<i>roll width</i>		
PE foam sheet	1.0–1.3 m	
HDPE film	foam sheet	

General notice

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	+0.20 m	
<i>roll length</i>	15–100m	

2. Technical data		
<i>density</i>		
density of foam layer	35 kg/m ³	
density of HDPE	950 kg/m ³	
weight	83 g/m ²	±5 %
<i>acoustic properties</i>		
reflected walking sound reduction	22%	IHD - W431 ²
impact sound improvement	22 dB	LVS EN ISO 10140-3 ²
impact sound pressure level L'n,w (hollow core slab 300/parquet underlay)	55 db	LVS EN ISO 10140-3 ²
<i>Moisture Barrier Qualities</i>		
water vapour permeability (W)	<11 x 10 ⁻¹² kg/(m ² x s x Pa)	test report VTT-S-00545-07 ¹
water vapour permeability (δ)	<4 x 10 ⁻¹⁴ kg/(m x s x Pa)	test report VTT-S-00545-07 ¹
Sd-value	comparable >100m	combined effect of ventilation feature and vapour barrier properties, test report VTT-S- 06851-08/GB ¹
thermal resistance R	0.040 m ² K/W	EN 12667, test report VTT-S-10322-08 ¹
Area of subfloor surface free for air exchange	60 %	Test report No. PEPI-17112015. Print method ³
<i>Drying characteristic of the subfloor (DCS).Loosing of moisture in 60 days (kg)</i>	>2 kg	Test report No. PRQC 100.004, 12.11.2015, Determination of concrete drying underneath underlay with air channels/ventilation gap ³
<i>Compressibility</i>		
Compression strength (kPa)	≈ 9	CEN/TS 16354:2013, EN 826 + A.3.5 ³
vertical deformation of an installed laminated flooring over ProVent	<0.5 mm	Test report, Nr.PEPI-16112015-2: Vertical deformation of a laminate flooring installed over ProVent ⁶ 100 kg load applied on a sample floor of 6.25 m ² area with a pressure of 3.63 t/m ²

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Effect of dynamic load on a sample flooring over ProVent	no change or damage	Research report No.PEPI-16112015-1 ³
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Other properties & application information:

product lifetime	50 years	
Level of harmful emissions	M1 (best emission class for building materials)	Rakennustieto, Finnish Building Information Foundation RTS, 23.09.2012, test report VTT-S-05584-09 ¹
VOC and aldehyde emission	Fulfils the requirements of the AgBB-Scheme and "DIBt Principles for the health assessment of construction products in interiors"	EN ISO 16000 ²
Application areas	with laminate and parquet (engineered) flooring	minimum thickness – 6 mm
use with floor heating system	YES	
compensation of uneven floor	1.0 mm	
recyclable	YES	100 % recyclable

¹ Test reports issued by VTT Technical Research Centre of Finland, VTT Building and Transport, P.O. Box 1804, FIN-02044, Finland. Reports are available in Finnish and English.

² Test reports issued by EPH Entwicklungs- und Prüflabor Holztechnologie GmbH, D-01217 Dresden, Germany.

³ Test reports issued by PEPI RER Quality Control Department

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