

MFPA Leipzig GmbH

Testing, Inspection and Certification Authority for
Construction Products and Construction Types

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Test Report No. PB 1.5/19-029-1

19 November 2019

No. Copy 1

Contracting body: Soudal NV
Everdongenlaan 18
2300 Turnhout - Belgium

Task: Test of water vapour permeability according to DIN EN ISO 12572

Material: flexible foil for vaporinhibiting and airtight sealing of connections
around windows, doors and panels

Product: SWS Inside Standard
SWS Outside Standard

Samples delivery: 08/07/2019

Persons in charge: Stefan Laut
Dipl.-Ing- (FH) Franziska Volke
Dr.-Ing. Stephan Reichel

Testing period: August – November 2019

This report consists of 5 pages.

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Deutsche
Akkreditierungsstelle
D-PL-11021-01-00

Testing laboratory accredited by DAKKS GmbH according to
DIN EN ISO/IEC 17025. The certificate can be seen on
www.mfpa-leipzig.de

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1 Objectives and material delivery

MFPA Leipzig GmbH was commissioned with the testing of the water vapour permeability according to DIN EN ISO 12572 (23 °C and 50/93 % r.h.) of two flexible foils for vaporinhibiting and airtight sealing of connections around windows, doors and panels (window sealing tapes).

On 08 July 2019 testing material was delivered to MFPA Leipzig GmbH. According to the client, these were the products:

- SWS Inside Standard and
- SWS Outside Standard.

2 Test laboratory

MFPA Leipzig GmbH laboratory is working under the strict rules of DIN EN ISO 17025 Quality Management system. The test of water vapour permeability according to DIN EN ISO 12572 belongs to the accredited test methods (Accreditation with flexible scope).

DIN EN ISO 12572 2001-09	Hygrothermal performance of building materials and products - Determination of water vapour transmission properties (ISO 12572:2001); German version EN ISO 12572:2001
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Testing device:	test of water vapour permeability in climate chamber measuring the change of mass with precision scale
Execution:	The test of water vapour permeability is being done according to DIN EN ISO 12572, appendix A, figure 1. Based on the change of mass the water vapour permeability can be assessed.
Climate:	23 (±0.5) °C, 50/93 (±3) % rel. humidity
	Climatic chamber: 50 % rel. humidity
	Ammoniumdihydrogenphosphate 93 % rel. humidity

3 Test results

3.1 SWS Inside Standard

Climate: 23 °C, 50/93 % rel. humidity

Testing area: 113 cm² (∅ 120 mm)

Medium air pressure (p): 1001 hPa

Testing period: 12.08. – 07.11.2019

Specimen		inS-1	inS-2	inS-3	inS-4	inS-5	average
Thickness	[μm]	711	692	667	690	678	690
Areolar mass	[g/m^2]	263	265	260	264	256	261
density	[kg/m^3]	370	383	389	383	377	380

Specimen	Water vapour diffusion flux density g [$\text{kg}/(\text{m}^2 \cdot \text{s})$]	Water vapour diffusion transmission coefficient w_p [$\text{kg}/(\text{m}^2 \cdot \text{s} \cdot \text{Pa})$]	Water vapour diffusion equivalent air layer thickness μ [-]	Mean water vapour diffusion resistance value s_d [m]
inS-1	4,84E-09	4,00E-12	69935	49,7
inS-2	5,01E-09	4,15E-12	69303	47,9
inS-3	5,12E-09	4,20E-12	70911	47,3
inS-4	4,95E-09	4,09E-12	70544	48,6
inS-5	5,45E-09	4,54E-12	64441	43,7
average	5,1E-09	4,2E-12	69027	47

3.2 SWS Outside Standard

Climate: 23 °C, 50/93 % rel. humidity

Testing area: 127 cm² (∅ 127 mm)

Medium air pressure (p): 1000 hPa

Testing period: 15.07. – 23.07.2019

Specimen		outS-1	outS-2	outS-3	outS-4	outS-5	average
Thickness	[µm]	643	694	654	660	657	660
Areolar mass	[g/m ²]	143	144	145	144	145	144
density	[kg/m ³]	223	208	221	219	221	218

Specimen	Water vapour diffusion flux density g [kg/(m ² ·s)]	Water vapour diffusion transmission coefficient w _p [kg/(m ² ·s·Pa)]	Water vapour diffusion equivalent air layer thickness µ [-]	Mean water vapour diffusion resistance value s _d [m]
outS-1	2,74E-06	3,08E-09	100,0	0,06
outS-2	2,76E-06	3,12E-09	91,4	0,06
outS-3	2,67E-06	2,98E-09	101,5	0,07
outS-4	2,80E-06	3,17E-09	94,5	0,06
outS-5	2,69E-06	3,01E-09	99,9	0,07
average	2,7E-06	3,1E-09	97	0,06




4 Summary

The results of the tests of water vapour permeability according to DIN EN ISO 12572 are summarised below.

Product	Climate	Water vapour diffusion equivalent air layer thickness s_d [m]
SWS Inside Standard	23 °C, 50/93 % r.F.	47
SWS Outside Standard	23 °C, 50/93 % r.F.	0,06

The results of the tests exclusively relate to the items tested. This document does not replace a certificate of conformity or suitability according to national and European building codes.

Leipzig, 19 November 2019


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