



# Mfpa Leipzig GmbH

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

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## Test Report No. PB 1.5/19-029-2

19 November 2019  
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Contracting body: Soudal NV  
Everdongenlaan 18  
2300 Turnhout - Belgium

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

Material: flexible, full-surface self-adhesive foil for vaporinhibiting and airtight sealing of connections around windows, doors and panels

Product: SWS Inside Extra  
SWS Outside Extra

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](http://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, full-surface self-adhesive 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 Extra and
- SWS Outside Extra.

## 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.	
Installation direction:	adhesive layer on cup side with sorbent, fleece layer on climatic chamber side	
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 Extra

Climate: 23 °C, 50/93 % rel. humidity

Testing area: 113 cm<sup>2</sup> (∅ 120 mm)

Medium air pressure (p): 994 hPa

Testing period: 27.09. – 07.11.2019

Specimen		inE-1	inE-2	inE-3	inE-4	inE-5	average
Thickness	[µm]	824	866	892	887	871	<b>870</b>
Areolar mass	[g/m <sup>2</sup> ]	438	434	439	434	435	<b>436</b>
density	[kg/m <sup>3</sup> ]	532	501	493	489	499	<b>503</b>

Specimen	Water vapour diffusion flux density g [kg/(m <sup>2</sup> ·s)]	Water vapour diffusion transmission coefficient w <sub>p</sub> [kg/(m <sup>2</sup> ·s·Pa)]	Water vapour diffusion equivalent air layer thickness µ [-]	Mean water vapour diffusion resistance value s <sub>d</sub> [m]
inE-1	5,23E-09	4,34E-12	56179	46,3
inE-2	4,97E-09	4,15E-12	55524	48,1
inE-3	5,33E-09	4,46E-12	50188	44,8
inE-4	5,08E-09	4,16E-12	54026	47,9
inE-5	4,76E-09	3,92E-12	58498	51,0
<b>average</b>	<b>5,1E-09</b>	<b>4,2E-12</b>	<b>54883</b>	<b>48</b>

### 3.2 SWS Outside Extra

Climate: 23 °C, 50/93 % rel. humidity

Testing area: 127 cm<sup>2</sup> (∅ 127 mm)

Medium air pressure (p): 1000 hPa

Testing period: 15.07. – 23.07.2019

Specimen		outE-1	outE-2	outE-3	outE-4	outE-5	average
Thickness	[µm]	679	657	652	657	667	<b>660</b>
Areolar mass	[g/m <sup>2</sup> ]	305	312	309	310	307	<b>308</b>
density	[kg/m <sup>3</sup> ]	449	475	474	473	460	<b>466</b>

Specimen	Water vapour diffusion flux density g [kg/(m <sup>2</sup> ·s)]	Water vapour diffusion transmission coefficient w <sub>p</sub> [kg/(m <sup>2</sup> ·s·Pa)]	Water vapour diffusion equivalent air layer thickness µ [-]	Mean water vapour diffusion resistance value s <sub>d</sub> [m]
outE-1	3,20E-07	2,70E-10	1087	0,74
outE-2	3,37E-07	2,84E-10	1066	0,70
outE-3	3,35E-07	2,82E-10	1082	0,70
outE-4	3,22E-07	2,72E-10	1115	0,73
outE-5	3,19E-07	2,69E-10	1108	0,74
<b>average</b>	<b>3,3E-07</b>	<b>2,8E-10</b>	<b>1092</b>	<b>0,72</b>



## 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 Extra	23 °C, 50/93 % r.F.	<b>48</b>
SWS Outside Extra	23 °C, 50/93 % r.F.	<b>0,72</b>

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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