

102006317 Water vapour resistance- Restricted

# Report

## Testing of water vapour resistance for Rapido Tynnpuss (thin finishing mortar)

*This report is a translated version of the original report 102006317 Rapport Vanndampmotstand Rapido Tynnpuss RVL Products*

### The name of Rapido Tynnpuss is today RVL

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#### Material testing Trondheim

The results are only valid for the tested objects

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**KEYWORDS:**

Finishing mortar, driving rain, light weight concrete

**VERSION**

1

**DATE**

2017-08-14

**AUTHOR**

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**CLIENT**

RVL Products AS, Lindgaards gate 69, 3213 SANDEFJORD

**CLIENT'S REF.**

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**PROJECT NO.**

102006317

**NUMBER OF PAGES:**

2 incl. one Appendix

**Introduction**

SINTEF Building and infrastructure has, on behalf of RVL Products AS, performed test in accordance with NS-EN ISO 12572, *Hygrothermal performance of building materials and products Determination of water vapour transmission properties Cup method* on Rapido Tynnpuss (thin finishing mortar).

**Result**

The result is given as  $s_d$  – value (equivalent air layer thickness). This value indicates how thick a stationary air layer has to be to give the same water vapour diffusion resistance as the material layer.

The result from the test shows an  $s_d$  – value of 0,120 m for the tested Rapido Tynnpuss.

Determination of water vapour resistance is accredited testing and the results are also shown in Appendix 1.

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102006317

Water vapour resistance

**CLASSIFICATION**

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## Appendix 1

### TEST 107

Test report: This version is a translated version of report L1090006-15/636 dated 16.11.2015

<b>Client:</b> RVL Products AS	<b>Title:</b> Measurement of water vapour resistance on
<b>Project no.:</b> L1090006-15/636-102003629	<b>Rapido Tynnuss</b>

#### Test objects:

<b>Product name:</b> <u>Rapido Tynnuss</u>	<b>Arrival date/Arrival no.:</b> 05.04.2013/63-13
<b>Product type:</b> Thin finishing mortar applied on 12,5 gypsum boards	<b>Test objects obtained:</b> Sent from SINTEF's laboratory in Oslo
<b>Thickness of test pieces (mm):</b> 1. 15,58 2. 16,35 3. 15,62 4. 16,38 5. 15,83	<b>Product identification (product no. etc.):</b> -
	<b>Equipment used in connection to measurements (equipment number):</b> 2147, 2247, 2002, 2146, 2148, 2149, reference plates, thickness gauge, Solartron 3595 logger

#### Testing:

<b>Testing performed by:</b> MOISTURE LABORATORY	<b>Preparation of test pieces:</b> The mortar was applied on gypsum boards at SINTEF's laboratory in Oslo by the client.
<b>Test method:</b> EN ISO 12572:2016 <i>Hygrothermal performance of building materials and products Determination of water vapour transmission properties Cup method</i>	The mortar was applied in one layer Total consumption: 6,62 kg/m <sup>2</sup>
<b>Deviations from the test method:</b> -	Test condition, average values of the test period: Relative air humidity in the box: 94,1 % Relative air humidity in the test chamber: 50,4 % Temperature in the box: 23,0 °C Temperature in the test chamber: 23,0 °C Barometric pressure: 997,6 hPa
<b>Conditioning period 23 °C ± 0.5 and 50% RH ± 5:</b> 05.04.2013 – 09.04.2013	
<b>Test period:</b> 10.04.2013 – 23.04.2013	

#### Results:

Test piece no.	Equivalent air-layer thickness s <sub>e</sub> -value (m)	Water vapour resistance ·10 <sup>6</sup> (m <sup>2</sup> Pa/kg)	Parameters taken into account:
1	0,116	0,580	<ul style="list-style-type: none"> <li>- Variations in the relative humidity.</li> <li>- Variations in the temperature</li> <li>- Variations in the barometric pressure.</li> <li>- Surface resistance at the specimen's upper side.</li> <li>- Vapour transport through the overlap zone at the seal between the specimen and the test box.</li> <li>- Resistance of the air layer in the cup, including the effect of increasing air layer thickness due to water evaporation</li> </ul>
2	0,127	0,640	
3	0,113	0,570	
4	0,127	0,640	
5	0,117	0,590	
Mean value ± stddev. of mean value.	0,120±0,003	0,604±0,002	
<b>Margin of error for each "test-cup" (cross mark):</b> 9 % (x), 11 % , 13 %			<b>Direction of the water vapour transport:</b> -

Trondheim, 14.08.2017

For SINTEF Building and Infrastructure, Trondheim



Noralf Bakken

The results are only valid for the tested objects. The calculated uncertainty of the results is an expanded uncertainty based on a standard uncertainty multiplied with a coverage factor of k=2, which gives a coverage level of approximately 95%.

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