

## AIR TIGHTNESS SUBSTANTIATION SHEET

ISO 5214

### Y-Wall, Cemboard, Multipurpose

#### Technical Report Summary

- Title:** Air tightness testing of samples of RCM wallboards
- Report No:** N950-18-17648
- Test Centre:** VINCI Technology Centre UK Limited,
- Issue date:** 20/12/2018
- Standards:** The test samples comprised RCM Cemboard, Multipurpose and Y-Wall panels. The test methods were in accordance with the CWCT Standard Test Methods for building envelopes, 2005. The testing was carried out in accordance with CWCT Standards.

#### DESCRIPTION OF TEST SAMPLE

An example of the typical wall structure for each material type is shown further below.

The samples measured 2400 mm long by 2400 mm wide and had central vertical and horizontal joints sealed using 60 mm wide RCM Dafa Vapour Barrier UV Tape Black. Over the top of tape, and long the sides of the tape, was applied 100 mm wide RCM Jointseal liquid (roller applied). This water based (nontoxic) protective coating formed a flexible film over the board joint.

**Sample 1** comprised 9 mm thick Y-wall.

**Sample 2** comprised 6 mm thick Multipurpose.

**Sample 3** comprised 10 mm thick Cemboard.

**Sample 4** comprised 6 mm thick Y-wall.

## PASS/FAIL CRITERIA

The permissible air flow rate,  $Q_0$ , at peak test pressure,  $p_0$ , could not exceed: 1.5 m<sup>3</sup> per hour per m<sup>2</sup>.

At intermediate pressures,  $p_n$ , flow rates,  $Q_n$ , were calculated using  $Q_n = Q_0(p_n/p_0)^{2/3}$

The area of the sample was 5.76 m<sup>2</sup>.

## Results

	Infiltration (max at 600Pa)	Exfiltration (max at 600Pa)
Sample 1	0.24	0.07
Sample 2	0.23	0.28
Sample 3	0.16	0.16
Sample 4	0.43	0.47

**Note:** values are m<sup>3</sup>/hour/m<sup>2</sup>

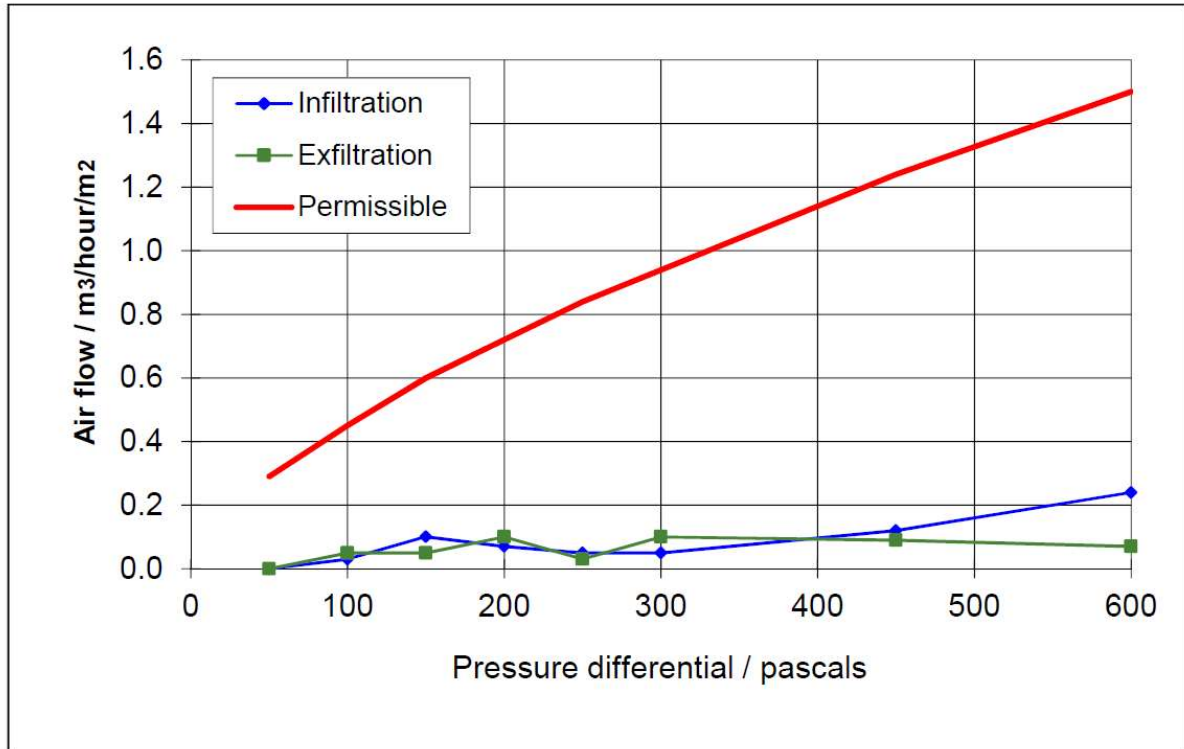


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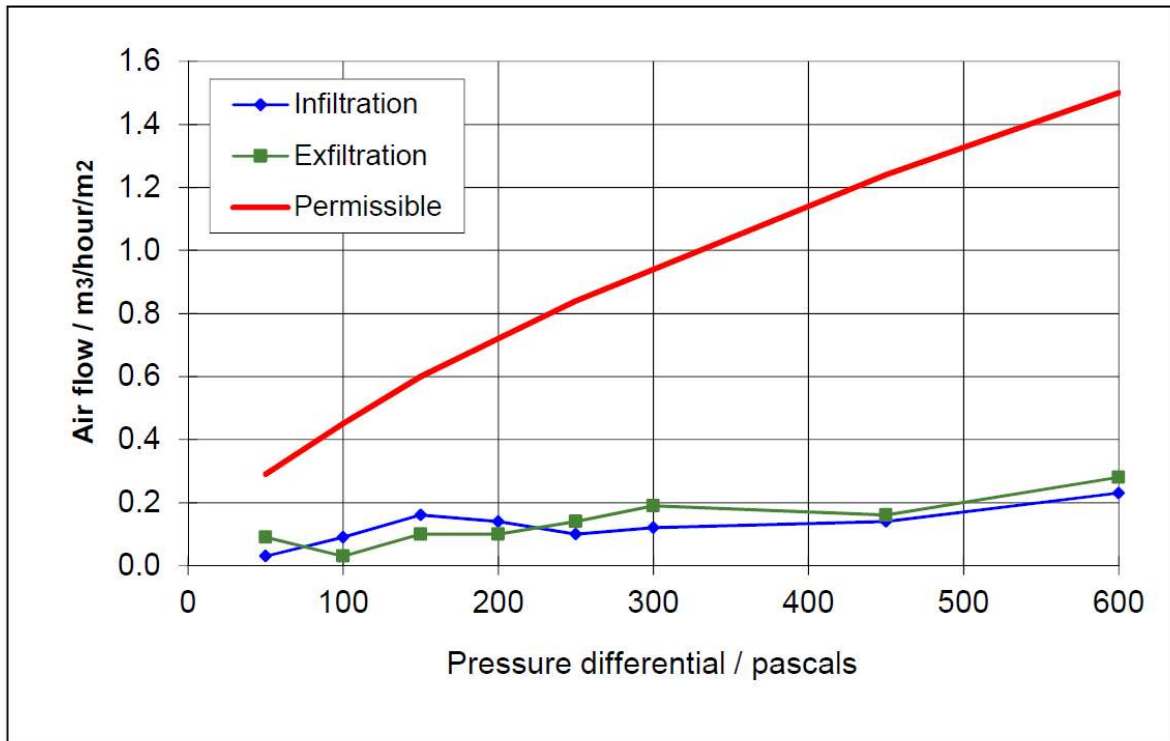
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### Sample 1 (9 mm Ywall) - air permeability test results



### Sample 2 (6 mm Multi-purpose) - air permeability test results

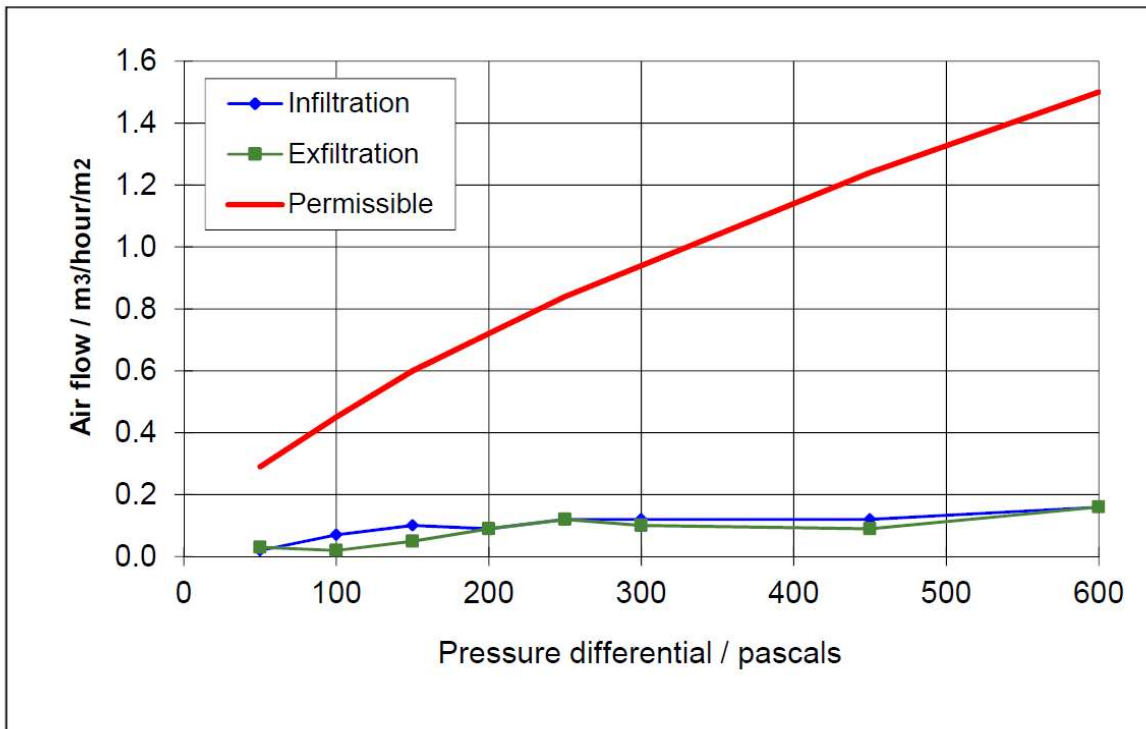


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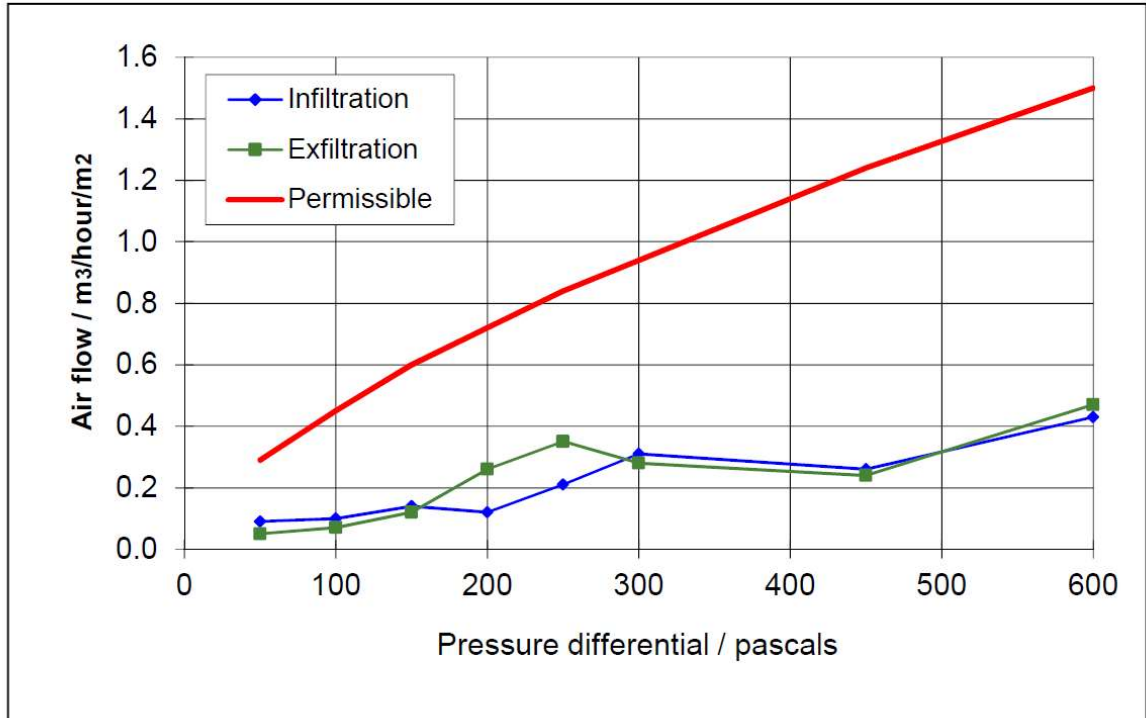
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### Sample 3 (10 mm Cemboard) - air permeability test results



### Sample 4 (6 mm Ywall) - air permeability test results



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