



RockRoof – Rockwool International A/S

EN 12865:2001

Hygrothermal performance of building
components and building elements



**DANISH
TECHNOLOGICAL
INSTITUTE**
CPR 1235



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Determination of the resistance of external wall systems to driving rain under pulsating air pressure

Report no.: 859287-VPS



Performed for:

Rockwool International A/S
Hovedgaden 584
DK-2640 Hedehusene

Performed by:

Danish Technological Institute
Kongsvang allé 29
8000 Aarhus C

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Appendices: 1 (1-page total)

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Author: Mads Borregaard Hansen



Test report

- Client:** Rockwool International A/S
Hovedgaden 584
DK-2640 Hedehusene
- Material:** An inclined roof mockup consisting of overlapping roof panels, solar- and glass panels.
Further details can be found on page 4.
- Sampling:** The test material was forwarded by the client and received at the Danish Technological Institute on 2020-11-03.
- Test period:** The testing was carried out on 2020-11-24
- Method:** EN 12865:2001 Hygrothermal performance of building components and building elements - Determination of the resistance of external wall systems to driving rain under pulsating air pressure
- Result:** The test mock-up has approved to the following results according to EN 12865:2001:

Approved up to 1200 Pa, method A with no water penetration.
Further details can be found on page 5.
- Storage:** The sample will be destroyed after 2 months if nothing else has been agreed in writing.
- Terms:** Accredited testing was carried out in compliance with international requirements (EN/ISO/IEC 17025:2005) and in compliance with Danish Technological Institute's General Terms and Conditions regarding Commissioned Work accepted by Danish Technological Institute. The test results apply to the tested products only. This report may be quoted in extract only if the laboratory has granted its written consent.
- Location:** 26-11-2020, Danish Technological Institute, Building & Construction, Aarhus



Mads Borregaard Hansen
Consultant, Engineer

Telephone: +45 7220 1141
E-mail: mmh@teknologisk.dk



Morten Jul Laegaard
Business Manager (co-reader)

Telephone: +45 7220 1132
E-mail: mjld@teknologisk.dk



Description of test specimen

The test mock-up was delivered by the client and modified in cooperation with Danish Technological Institute. The mock-up had to be modified to insure an acceptable fit and to make it air- and watertight to the test chamber. The modifications did not compromise the intended function of the roof and structure.

The mock-up was built to be a representative roof structure regarding joining, inclination and the roofs performance to resist rain. The structure was made from timber and OSB-boards like a traditional roof structure.

The dimensions of the roof structure without the modified side panels, 320 x 160 x 170 cm (LxWxH)
Each panel was measured at 160 x 41 cm, with an overlap of approx. 12.5-13.0 cm.
The inclination of the roof was measured at approx. 45°



Photo 1 – mock-up with modified side and top panels.



Photo 2 – Backside of mock-up



Photo 3 – coloured solar panels



Photo 4 – Water spraying from nozzles



Test procedure

The test mock-up was fitted and installed in a test chamber capable to provide a controlled differential air pressure across the mock-up, while spraying a continuous water film all over the surface of the roof panels.

The mock-up was tested according to procedure A table 1 in EN 12865:2001. The procedure consists of an initial period for 20 min with water spray and on additional air pressure difference. Followed by steps of pulsating air pressure difference starting at 0-150 Pa in periods of 10 minutes each. Next step 0-300 Pa in 10 minutes. The steps continue to either A) water is penetration the panels or B) completes the finale scheduled step. The water spray never stops in or between pressure steps.

The test was scheduled to process to 1200 Pa.

Test results

Procedure A			
Pressure Step [Pa]	Time interval [min]	Total time [min]	Notes
0	20	20	No observations
0 to 150	10	30	No observations
0 to 300	10	40	No observations
0 to 450	10	50	No observations
0 to 600	10	60	No observations
0 to 750	10	70	No observations
0 to 900	10	80	No observations
0 to 1050	10	90	No observations
0 to 1200	10	100	No observations



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DANAK participates in the multilateral agreements for testing and calibration under European co-operation for Accreditation (EA) and under International Laboratory Accreditation Cooperation (ILAC) based on peer evaluation. Accredited test reports and calibration certificates issued by laboratories accredited by DANAK are recognized cross border by members of EA and ILAC equal to test reports and calibration certificates issued by these members' accredited laboratories.

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Construction Product Regulation:

The Danish Technological Institute guarantees that employees carrying out tests to be used together with harmonized standards under notification no. 1235 according to EU regulation 305/2011, article 43, satisfy all the requirements made for capability, integrity and impartiality. You find the CPR here:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:088:0005:0043:EN:PDF>

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