

Passive House measurement after 16 years

is air-tightness of the envelope still intact?

Lars Due, ISOLINK, Denmark
20th anniversary of Blower-Door testing



Experiences from teaching

- ISOLINK has many years of experience in teaching carpenters how to ensure an airtight building envelope.



Experiences from teaching

- In the years of teaching, there are also products on the Danish market that are assessed as questionable
- In Denmark, there is a somewhat strange idea, that if it's cheap, it's good.
- A view I challenged years ago

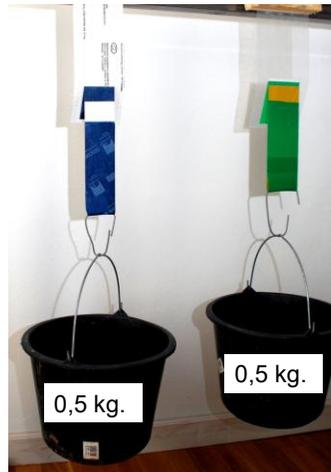


Experie

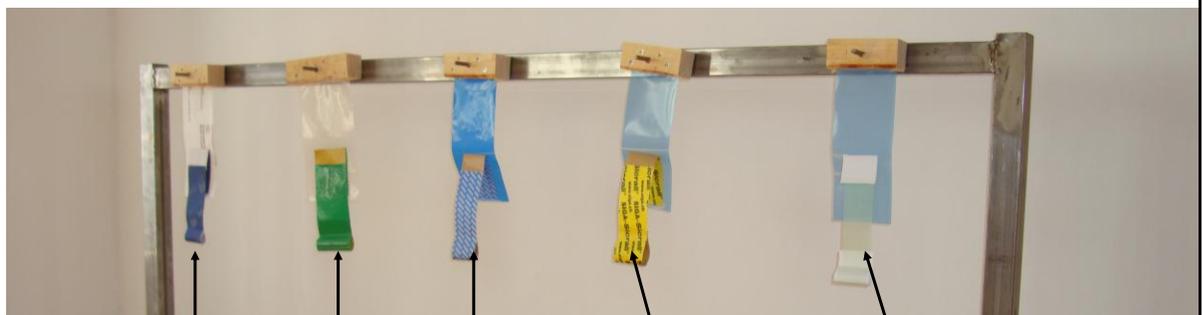


Experiences from teaching and testing

- In the simple setup, pull with 0.5 kg in a 180 degree pull



Experiences from teaching and testing



4 hours and 45 minutes.

Special tap for Greenland 12 hours

69 min.

40 min.

4 sek.



Experiences from teaching and testing

- Experience from the Danish market shows an extremely large gap between the tape's ability to stick vapor barriers together.
- There is also a correlation between adhesiveness and price.



Experiences from teaching and testing

- Examples of challenges with specific products from the Danish market
- After 2-3 years of installation, it is seen that the adhesive is apparently leaking out of the JOINT.



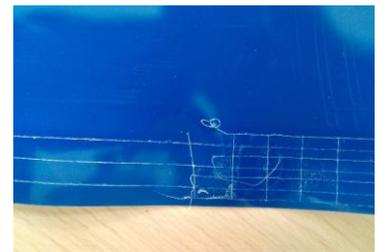
Experiences from teaching and testing

- Examples of challenges with specific products from the Danish market
- Some of the tapes apparently have an unacceptably large back-draft.



Experiences from teaching and testing

- Examples of challenges with specific products from the Danish market
- After 2-3 years, the tape delaminates so that the backing and adhesive are no longer connected.



Re-testing passive house after 16 years

- In relation to the experiences with good and bad materials, it is interesting to be allowed to retest a house again after so many years.



Re-testing passive house after 16 years

- First measurement in 2008
 - $n_{50} = 0,09$ 1/h
- Second measurement in 2024
 - $n_{50} = 0,12$ 1/h
- The windows were the same and it was found that they needed readjustment and new sealing strips.
- By sealing all windows and doors, the same value as measured in 2008 could be achieved



Re-testing passive house after 16 years

- The building is built with quality materials and it is gratifying to note that if quality is prioritized, the airtightness of the envelope will also last throughout the lifetime of the building.

