

Airtightness

Architecture

Why the air barrier matters as much as the insulation, and how it is tested.

Airtightness is the resistance of the envelope to uncontrolled air leakage, measured by pressurising the building and recording the flow needed to hold the pressure.

TEST PRESSURE
50 Pa

PASSIVHAUS LIMIT
0.6 ach at 50 Pa

- Tested at 50 pascals, by blower door.
- Reported as air changes per hour, or flow per area.
- Leakage carries moisture into the construction.
- Wind-washed insulation loses much of its value.
- Airtight buildings need designed ventilation.
- The barrier must be continuous and drawn as one line.

LOOK FOR IT

Draw the air barrier on every section as an unbroken red line before the drawing leaves the office.

Educational reference. Airtight without adequate ventilation is a health problem, not an achievement.