

Building Preparation for Air Testing

Prior to the test being undertaken, the building must be prepared to allow effective pressurisation, and representative results to be obtained. The method of preparation referred to is generally compliant with BS EN 13829:2001 Method B – Test of the Building Envelope.

To allow pressure to equalise fully around the tested enclosure, all internal doors should be fully opened and restrained. All areas of the building to be tested should be connected by openings no smaller than a single leaf doorway (say 800mm x 2000mm). Any areas of the building where this is not achievable must be recorded and noted within the test report.

Further guidelines for preparation include:

- Internal doors to riser cupboards may be closed but should not be artificially sealed.
- Lift doors should be closed (but not artificially sealed). Any external lift shaft vents should remain open.
- All drainage traps should be filled with water. All incoming service penetrations (e.g. power, telecoms) should be permanently sealed.
- All external doors and windows should be closed (but not artificially sealed). The exception to this will be apertures to which test equipment is connected.
- Trickle vents, smoke vents and all passive ventilation systems should be closed and temporarily sealed. Permanently open uncontrolled natural ventilation openings should be temporarily sealed.
- Mechanical ventilation and air conditioning systems should be turned off. These systems should be temporarily sealed to prevent air leakage through the systems during the test.

Should only part of a building be subjected to the test, then doors bounding the test enclosure which will ultimately not fall on the external envelope, may be temporarily sealed.

For the result of the test to be representative, the external envelope should be in its final completed state. However it may be necessary to erect some temporary seals/screens to allow the test to be undertaken, (for example if a door or window has been broken, or is missing). Any such temporary seals must be robust enough to withstand the test pressure.

Temporary seals employed during the test (including the method of closure of mechanical ventilation systems) must be spot checked and recorded to inclusion in the test report. As temporary seals may, in practice, be more airtight than the envelope element that they replace, results obtained with such temporary seals must be qualified accordingly.

It will normally be the responsibility of the client/main contractor to prepare the building prior to the test. The testing organisation should undertake a reasonable assessment of the building envelope, both prior to and after the test being undertaken.

Any elements at variance with these guide notes should be highlighted within the final report such that the client/building inspector may assess whether the result obtained is adequately representative of how the building would perform in its final completed condition. Temporary seals to incomplete components are not normally desirable; any such temporary seals must be recorded.