Technical Note 102

Decision Tables for Site Watertightness Testing of Walls

Introduction

1 There are two test methods (as defined in the CWCT *Standard test methods for building envelopes*) in common use for watertightness testing of wall cladding and glazing on site: the **Hose Test** (CWCT Test Method 9) and **Spray Bar Test** (CWCT Test Method 10). The **Hose Test** may be used at the full water pressure or, in certain circumstances, at a reduced water pressure.

2 For sealed joints the preferred method of test is always the **Hose Test** at full water pressure. However, there are occasions when it may be appropriate, or even necessary, to apply the **Hose Test** with reduced water pressure, or to use the **Spray Bar Test**.

3 Some guidance on these methods of test is given in TN41 *Site testing for watertightness*, but there is no detailed guidance on when it is appropriate to select each method of test. Separate guidance on test methods for investigating water leakage through completed building envelopes is given in TN101 *Investigating water leakage through the building envelope*.

4 The purpose of this Technical Note is to provide further guidance on when to select these methods of test for specific situations. Four tables at the end of this Note set out preferred methods of test for Systems, Unsealed Joints, Rainscreens and Interfaces, in different circumstances.

Objectives

5 The purpose of site watertightness testing of newly-constructed wall cladding and glazing, prior to Practical Completion, is to assess site workmanship for those joints that are formed and sealed on site, and test that the installed façade does not leak when subjected to such testing. This does not guarantee that the cladding or glazing will not leak in service, for example during severe or unusual weather conditions, but it gives confidence that the installed system has been properly constructed. It is still contingent upon the specifier to select a façade system that is appropriate for the site exposure and has been subjected to an appropriate level of laboratory testing.

6 Successful testing also provides comfort that factory-made joints have been properly formed, and it may provide some assessment of the performance of untested and project-specific ancillary components such as window sills and interface flashings.

7 The **Hose Test** at full water pressure (220±20 kPa) is known to provide a reliable assessment of weathertightness for joints as constructed. As a rule if a system has passed a full-water-pressure **Hose Test** it should not leak under severe weather conditions in the UK (i.e. rainfall at 0.25x maximum serviceability design wind pressure).

8 Most systems that have passed a laboratory static watertightness test at 600 Pa, including many with opening joints, should pass an on-site **Hose Test** at full water pressure so long as the details, materials and workmanship are the same as tested in the laboratory. However,