

ASFP ADVISORY NOTE 7:

Horizontal linear gap seals used in curtain walling systems

Introduction

Seals used between building elements such as linear gap seals and seals used at the periphery of floor slabs in buildings with curtain walling need to have their fire resistance verified by the appropriate fire test method.

Linear gap seals

Linear gap seals are used between elements of construction such as between two vertical walls at right angles to each other or between a wall and a ceiling to maintain fire resistance. The boundary and restraint conditions for these types of seal are relatively straightforward and the appropriate fire test method is BS EN 1366- 4 Fire resistance tests for service installations - Part 4: Linear joint seals.

Perimeter edge seals used at periphery of buildings with curtain walls

Perimeter edge seals used at the periphery of buildings with curtain walls may appear to be very similar to linear joint seals and so the test method might be expected to be BS EN 1366-4 as above.

However, despite the similarity in general concept, the boundary, restraint, and fixity conditions as well as the type of fire exposure for curtain wall perimeter edge seals differ significantly from linear gap seals. Consequently, there is an appropriate test method which incorporates the specific end use conditions for curtain wall perimeter edge seals. The test is BS EN 1364-4 Fire resistance tests for nonloadbearing elements - Part 4 Curtain walling – Part configuration. This standard details the correct ways of testing the horizontal linear gap seals used in these types of construction. This includes a thorough evaluation of the different restraint/support/fixity conditions in addition to the different fire exposures. The result of a BS EN 1366-4 test is relevant to the tested combination of perimeter edge seal and spandrel panel only not the curtain wall as a system.

The ASFP recommends that horizontal linear gap seals used in association with curtain walls are only tested to BS EN 1364-4 and that test evidence obtained using BS EN 1366-4 cannot be used to support that end-use application. However, it should be considered that Test results cover only the type / construction of the spandrel panel(s) used in the test. Additionally, any deviation or change of scope from that tested should only be done so through the rules laid out within BS EN 15254-6 " *Extended application of results from fire resistance tests- Part 6 Curtain Walling*".

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