

related test method	EN 1634-1: 1999 Fire resistance tests for door and shutter assemblies Part 1: Fire doors and shutters
subject	Testing of fire doors which incorporate small areas (size less than (200 x 200) mm) of differing thermal insulation than that of the main area(s) of the door and measurement of maximum temperature in these areas
reference of original query	TC2 N262rev2 Helpdesk 2000-06

Problem

EN 1634-1 defines (§ 9.1.2.3c) that the maximum temperature of the door or shutter leaf shall be measured 100 mm in from the edge of the door leaf.

The standard also defines (§ 9.1.2.4c) that the maximum temperature (supplementary procedure) of the door or shutter leaf shall be measured using additional thermocouples placed 25 mm in from the edge of the door leaf.

The standard also defines that when testing doors incorporating discrete areas of different thermal insulation to that of the main part of the door of size greater than (200 x 200) mm, these areas shall be evaluated separately for maximum temperature.

The standard does not define any requirement to evaluate small discrete areas of different thermal insulation to that of the main part of the door of size less than (200 x 200) mm. However, within such doors e.g. those with small glass viewing areas, often containing un-insulated glass, it is to be expected that the maximum temperature might be found at these areas.

Recommendation

Where door leaf(ves) incorporate small discrete areas of different (lower) thermal insulation to that of the main part of the door, of size less than (200 x 200) mm, each of these areas shall be evaluated separately, and the maximum temperature rise of each of these areas shall be measured by the placement of a single surface thermocouple at its centre.

