

Digest

External fire performance of roofs

A guide to test methods and classification

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Following the introduction of European fire test methods for determining the external fire performance of roof systems, and CE marking under the current Construction Products Directive and the soon to be implemented Construction Products Regulation, this Digest explains the test methods for roofs, and how the test data are used to classify the external fire performance. It discusses the limitations of the classification system, and the importance of specifiers correctly interpreting the information presented to them. It will help manufacturers to provide end users with the information they need to specify roofing systems in relation to their fire performance. It also explains how fire performance classifications relate to the guidance in Approved Document B.

1 Introduction

The roof is a key element in the overall performance of the building envelope. As well as being weathertight, structurally stable and durable, roof designs must also meet the fire performance characteristics set out in the building regulations. This guide aims to help those working with roofs to develop a clearer understanding of their external fire performance characteristics and how they are determined.

With the introduction of the Construction Products Regulation (CPR)^[1] on 1 July 2013 and European Conformity (CE) marking of products and systems covered by the CPR, manufacturers of external waterproof coverings have to declare a fire performance classification for their products, but this classification will depend on the make-up of the roof structure and insulation. Roof systems typically comprise a kit of parts that are assembled and installed on site. The elements frequently come from different manufacturers and suppliers, and are brought together only when the roof system is assembled.



Figure 1: Test equipment for carrying out fire tests on roofing materials to BS 476-3:2004

1.1 What is a roof?

BS 6100-1:2004 (*Building and civil engineering – Vocabulary – General terms*)^[2] includes the following definitions: