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Independent report

## Fire test report: DCLG BS 8414 test no.4

The report of the result of the fourth large scale test which shows how Aluminium Composite Material (ACM) cladding with a fire retardant polyethylene filler with stone wool insulation behave in a fire.

Published 11 August 2017

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From:

Ministry of Housing, Communities & Local Government

(<https://www.gov.uk/government/organisations/ministry-of-housing-communities-and-local-government>)

Applies to:

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### Documents

#### Fire test report: DCLG BS 8414 test no.4

([https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/641617/DCLGtest4\\_BS\\_8414\\_Part\\_1\\_test\\_report\\_Issue1\\_2.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/641617/DCLGtest4_BS_8414_Part_1_test_report_Issue1_2.pdf))

PDF, 3.75MB, 52 pages

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### Details

Update: the report dated 9 August version 1.0 contained a typographical error. The report above has been corrected.

This report is the fourth of a series, commissioned by the Department for Communities and Local Government (DCLG) intended to establish how different types of Aluminium Composite Material (ACM) panels in combination with 2 different types of insulation behave in a fire.

Following the fire at Grenfell Tower in London on 14 June 2017, the government established an Independent Expert Advisory Panel (<https://www.gov.uk/government/news/expert-panel-appointed-to-advise-on-immediate-safety-action-following-grenfell-fire>) to advise on immediate measures that should be put in place to help make buildings safe.

On 6 July the Independent Expert Advisory Panel recommended a series (<https://www.gov.uk/government/news/expert-panel-recommends-further-tests-on-cladding-and-insulation>) of large scale, BS 8414 (<https://shop.bsigroup.com/ProductDetail/?pid=000000000030357123>) tests be carried out in order to help building owners make decisions on any further measures that may need to be put in place.

This series of tests initially included 6 combinations of cladding systems. The detailed design of each test specimen has been reviewed by the Expert Panel and other industry bodies to ensure that it is representative of the systems that are in common use including the way it is fixed. These 6 tests incorporate each of the 3 common types of ACM panel, with core filler materials of unmodified polyethylene (PE), fire retardant polyethylene, and limited combustibility mineral. The 2 insulation materials used in the testing are rigid polyisocyanurate foam or non-combustible stone wool.

To further build the evidence available for experts and building owners so they can make informed safety decisions, on 8 August government commissioned a seventh large scale test – testing ACM with fire retardant polyethylene filler (category 2 in screening tests) with phenolic foam insulation.

Test no.4 relates to a cladding system formed using ACM panels with a fire retardant polyethylene core and a stone wool foam insulation.

The test result shows that this combination of materials can meet the criteria set out in building regulations guidance BR 135 (<https://www.brebookshop.com/details.jsp?id=327137>).

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1. 11 August 2017 The report dated 9 August version 1.0 contained a typographical error - report corrected.
2. 11 August 2017 First published.

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- Grenfell Tower (<https://www.gov.uk/government/collections/grenfell-tower>)