Nearly three years after the Grenfell Tower inferno, flammable cladding still widely used in UK

Alice Summers 4 April 2020

A widely used type of building cladding has proven in tests to be highly flammable.

Nearly three years after the inferno at Grenfell Tower in June 2017, when aluminium composite material (ACM) cladding led to the rapid spread of a fire that killed 72 people, high-rise buildings across the UK are still covered in dangerous combustible material.

The test carried out on High Pressure Laminate (HPL) cladding resulted in flames ripping through the test structure in minutes, failing the safety assessment by a large margin.

While the exact brands of cladding and insulation were not released, the Metal Cladding and Roofing Manufacturers Association (MCRMA), an industry association, said it used a structure made of a "standard" version of the widely used HPL cladding and phenolic foam insulation to carry out the large-scale fire test known as British Standard (BS) 8414. This is the official test to which combustible materials must be subjected to in order to assess compliance with building regulations.

In 2018, insulation company Kingspan revealed that a system using HPL cladding had previously failed at least one BS 8414 test. Yet HPL has continued to be widely used across the country. In the recent MCRMA assessment, flames reached the top of the nine-metre-high test wall in just seven minutes and 45 seconds, with temperatures exceeding 700°C, forcing the test to be halted early. The test should last at least 30 minutes and the temperature recorded must stay below 600°C for a material to pass.

The fire spread inconsistently, with the flames not immediately catching hold extensively across the cladding and appearing relatively benign before suddenly taking hold in the joints between the panels and ripping through the cladding system in minutes. Panels "pinged off" the rivets holding them in place, creating air space and rendering the fire barriers almost useless in slowing the spread of the flames.

The results demonstrate that HPL systems pose a similar

level of risk to the polyethylene-cored ACM cladding used on Grenfell, which failed the same test in six minutes and 35 seconds in the summer of 2017.

While it is not known exactly how many buildings are clad in HPL, research conducted by the housing publication *Inside Housing* found that 91 of the 1,612 high-rise buildings it surveyed were covered in this material. However, there are approximately 12,000 high-rise buildings over 18 metres tall across the country, with a further 100,000 buildings between 11 and 18 metres, so the real number of tall buildings using this cladding is probably in the thousands.

An additional survey by insulation manufacturer Rockwool identified 340 high-rise buildings with non-ACM cladding, many of which will be using HPL materials.

Warnings have been made about the danger of HPL for years, with industry experts calling on the government to implement large-scale testing and removal.

No tests were carried out to assess any HPL materials until midway through last year, when an HPL product treated with a fire retardant narrowly passed a BS 8414 test, despite temperatures rising to over 600°C after 25 minutes. The government issued guidance to local housing authorities stating that HPL could still be used on existing buildings if it was not combined with flammable insulation.

"Standard-grade" HPL was not subjected to any tests until the test in March this year, despite it being much more widely used than flame-retardant versions.

In a letter to the government, Dr Jonathan Evans, technical committee chair at the MCRMA who helped organise this recent test, said that he had called for the government to test standard-grade HPL in its post-Grenfell testing programme, but they had "flatly refused."

"The foundation of [the Ministry of Housing, Communities and Local Government's] independent expert panel's advice has been the 'view' that ACM [cladding] presents a unique danger despite there seemingly being no test evidence to support this. This is not 'expert advice'—it is little more than wishful thinking. You can't hide forever how these materials perform," Dr Evans wrote.

He added, "From a fire and rescue perspective, the performance of a standard HPL system is practically the same as that of polyethylene-cored ACM—you've got just a few minutes to prevent a very serious fire from rapidly developing.

"Arguably, due to the higher fuel content, an HPL fire might be more difficult to fight than ACM due to the greater heat release rate," he warned.

A 2019 study led by Professor Richard Hull, professor of chemistry and fire science at the University of Central Lancashire, already highlighted the danger of HPL materials, which have been associated with previous fire fatalities. Window panels using this material were installed at Lakanal House, a tower block in south London where six residents lost their lives in a fire in 2009 and another 20 were injured.

HPL cladding was also used on a student accommodation block belonging to the University of Bolton in the north of England, known as The Cube, where a massive fire broke out in November 2019. There were no fatalities, but two students had to be treated by paramedics for injuries, and the 211 students lost all their belongings.

Hull's study found that HPL cladding releases heat 25 times faster and burns 115 times hotter than non-combustible products. Speaking to *Inside Housing* in 2019, Hull stated, "I think that HPL has been neglected, and shouldn't have been neglected.

"One would fear that because of all the attention that has gone to the ACM buildings [that] the next disaster is likely to involve HPL rather than ACM—because they haven't had the fire risk assessments and so on."

Next to nothing has been done by the authorities to even address the danger posed by ACM cladding. According to government data, more than 400 residential blocks, in the public and private sectors, were found, after testing, to have flammable cladding. Yet as of January 16, 2020, at least 315 private and public high-rise buildings in England remain covered in ACM cladding. Remedial work has been completed on only 135 buildings, all but one in the public or social sectors, for which a pitiful £400 million has been made available since October 2018.

A further paltry sum of £200 million was made available in May last year, supposedly to handle at-risk buildings in the private sector. Taking account of the negligible remedial work done so far, between 13,300 and 17,100 households, comprising tens of thousands of people, live in unsafe privately owned homes. At the current rate, remediation on public sector blocks covered in ACM would take until October 2022, and private blocks not until October 2033. With popular revulsion at government inaction growing, Chancellor Rishi Sunak announced in his March 11 Budget an additional $\pounds 1$ billion "Building Safety Fund" for the removal of dangerous cladding of all forms from high-rise buildings. Sunak's announcement came after the National Housing Federation calculated that total costs for removal work are expected to easily top $\pounds 10$ billion in the social housing sector alone.

The lack of testing and removal work carried out thus far is testament to the deplorable levels of contempt evinced by central and local government for the lives of working class residents. In March, the government-established Grenfell Recovery Taskforce reported that while 194 of the 201 households made homeless by the Grenfell fire are now in permanent homes, six households are still in temporary accommodation and one household is still in a hotel.

Last month, the Grenfell Tower Inquiry was halted due to the coronavirus crisis. While necessary to protect its participants, the inquiry is further delayed. A timescale that was not set to publish the findings of phase two of its proceedings until 2023 will be pushed back even further, while those corporations and government bodies guilty of social murder roam free under protection from prosecution offered by this state-orchestrated whitewash.

The author also recommends:

The Grenfell Tower Inquiry: Anatomy of a cover-up—Part 1

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The Grenfell Tower Inquiry: Anatomy of a cover-up—Part 2

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The Grenfell Tower Inquiry: Anatomy of a cover-up—Part 3

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