Advice Note 22 - Use of High Pressure Laminate Panels in external wall systems

This Advice Note provides advice on the use of High Pressure Laminate Panels in external wall systems.

This Advice Note is written for building owners of residential buildings of 18m or more, although the principles may also apply to other building types.

1. Summary

1.1. The Expert Panel issued Advice Note 14, first published in December 2017 and updated in December 2018, on external wall systems that do not incorporate Aluminium Composite Material (ACM). The Expert Panel continues to support this advice. This supplementary note on High Pressure Laminate Panels (HPL) is intended to assist building owners in following the steps in Advice Note 14 and should be read in conjunction with it.

1.2. HPL panels can have a wide range of fire performance and it is important that building owners are aware of the fire performance of the panels that have been installed on their building(s).

1.3. The Ministry of Housing, Communities and Local Government (MHCLG) has conducted a BS8414 test of a cladding system comprising an HPL panel with fire retardant (Class B-s1, d0) together with stone wool insulation. This system achieved the performance criteria in BR135. The view of the Expert Panel is that this combination of materials can be safe on existing buildings, although as with other cladding systems this is also dependent on how it is fitted (including the installation as a whole system, extent and arrangement).

1.4. Systems using HPL panels of a European classification of Class C or D are very unlikely to adequately resist the spread of fire. Also, systems using any type of HPL panels (Class B, C or D) with combustible insulation are very unlikely to adequately resist the spread of fire. Building owners with these systems should immediately take action in line with Advice Note 14.

1.5. The view of the Expert Panel is that the level of risk from unsafe HPL systems is not as high a risk as unsafe systems using ACM Category 3 panels. Therefore, the Expert Panel remains clear that the immediate removal of unsafe systems using ACM Category 3 panels should be an absolute priority of focus for building owners and the sector, followed by immediate action to remediate unsafe HPL systems. For the avoidance of doubt both the removal of unsafe ACM Category 3 panels and action to remediate unsafe HPL systems should be carried out as soon as possible.

2. Determining the fire performance of an HPL panel

2.1. HPL panels are usually available in a wide range of colours and finishes which makes them attractive as a way of bringing colour and different finishes to an external facade.

2.2. HPL panels are usually made by taking sheets of wood or paper fibre, layering them with a resin and bonding them under heat and pressure. A HPL panel, may or may not include additional chemicals to provide fire retardant properties to the panel.

2.3. The fire classification of an HPL panel can vary depending on its thickness and whether or not it incorporates fire retardant chemicals. HPL panels with fire retardant chemicals added are sometimes referred to as “FR grade” and typically achieve Class B-s1, d0. Panels manufactured without fire retardant can be Class C or D, depending on the thickness of the panel.

2.4. It is important that building owners know the fire performance of the HPL panel that is used on the external wall of their buildings. For any building built, or refurbished, in the last 15 years, information should be available in as-built drawings or the Operation and Maintenance manual for the building or “Regulation 38” package of fire safety information. If this is not available, building owners may wish to contact the original construction contractor or architect and/or seek advice from a competent professional who will be able to advise further on what steps to undertake.

2.5. Information on the fire performance of the HPL panel installed, if not provided in the information above, may be available from the manufacturer provided the building owner can provide information on the characteristics of the HPL panel installed (i.e. colour, width, thickness, identifying markings).

2.6. We are aware that there have been some cases of product substitution and where building owners are not confident that the panel specified has been installed, they may wish to take additional steps to assure themselves of the panels that have been installed by commissioning a competent professional adviser to remove and examine the panels that have been installed, which may include bench scale testing. Where testing of the material is required, this should be carried out by a UKAS accredited testing laboratory.

3. HPL Panels used as part of an external wall system

3.1. For new residential buildings of 18 metres or more (or where building work is carried out on existing buildings of 18 metres or more), the government has introduced a ban on the use of combustible materials in external walls and specified attachments. The ban limits materials to products achieving a classification of Class A1 or A2-s1,d0, which is in line with classifications applied in many other EU member states.

3.2. The Expert Panel is not aware of any HPL panel meeting this classification

and therefore these should not be used in the external wall when carrying out building works on new residential buildings of 18m or more (i.e. new build, refurbishment of the external wall or a material change of use).

3.3. The test MHCLG has conducted is a large scale BS8414 test including HPL (FR) (Class B-s1,d0) panels with stone wool insulation. This combination was selected as MHCLG received feedback from industry that this type of HPL panel was commonly used on residential buildings of 18m.

3.4. The combination of HPL (FR) panels (Class B-s1,d0) with stone wool insulation tested, successfully achieved the performance criteria set in BR135 and the test results are available on the government website.

3.5. The Expert Panel has no reason to believe that there is a public safety risk arising from adequately installed (including their installation, extent and arrangement) systems involving HPL (FR) panels and stone wool.

3.6. The Expert Panel is clear that an external wall system using Class C or D HPL panels would not have met the functional requirements of the Building Regulations, or associated advice, when installed and presents a notable fire hazard on buildings over 18m. Building owners who identify these materials on residential buildings over 18m in height should take immediate measures to remediate their system, in line with Advice Note 14.

3.7. The Expert Panel has not been presented with any evidence of an HPL panel of any class achieving the performance criteria set out in BRE 135 when used in combination with combustible insulation. Where existing buildings have any HPL panels in combination with combustible insulation, they should immediately take action in line with Advice Note 14.

3.8. The view of the Expert Panel is that the level of risk from unsafe HPL systems is not as high a risk as unsafe systems using ACM Category 3 panels. Therefore, the Expert Panel remains clear that the immediate removal of unsafe systems using ACM Category 3 panels should be an absolute priority of focus for building owners and the sector, followed by immediate action to remediate unsafe HPL systems. For the avoidance of doubt both the removal of unsafe ACM Category 3 panels and action to remediate unsafe HPL systems should be carried out as soon as possible.

3.9. The government is working with the Expert Panel to consider whether there are any heightened risks linked to other cladding systems and broader fire and building safety issues in high rise buildings. The Expert Panel will provide further advice following the completion of the medium-scale non-ACM cladding testing programme.