

Confirming Quality

LUCIDEON HAS BEEN TESTING STRUCTURAL INSULATED PANELS (SIPS) FOR OVER 20 YEARS AND WITNESSED THE SYSTEMS ‘WAX AND WANE’ IN POPULARITY DURING THIS TIME. HERE THEY GIVE A QUICK OVERVIEW FROM A TESTING LABORATORY PERSPECTIVE.



is often very good when measured in the laboratory but requires skilled workmanship during installation onsite. When testing the panels in the laboratory, the creep deflection of the panel is always measured as SIPS have a reputation for creeping under long-term load. Although this is true, this is actually very minor at the working load and will depend on the insulation used in the core.

A European Assessment Document (EAD), ETAG 019, allows the system to be CE marked and early adopters should have a market advantage if they choose this route. This is a stringent document and covers all aspects of the panel performance, including structural, health and safety, durability and fire, as well as a factory production control requirement. Utilising ETAG 019 should ensure a high standard of panel is produced and that when installed onsite, the performance matches the manufacturers declared values.

Lucideon recently recognised the opportunity to extend its existing consultancy, testing and R&D capabilities, and become a Centre of Excellence for offsite and modular building testing. Find out more and/or download Lucideon’s guide for manufacturers who are looking to test their SIPS at www.lucideon.com/stmag Alternatively, contact Joanne Booth, Business Manager for Construction at Lucideon: joanne.booth@lucideon.com



The offsite construction industry is currently recognised as a growing sector due to government targets for increasing the housing stock, along with their support for growing offsite construction. As a result, SIPS are now being recognised as a potential major provider for offsite and modular buildings.

SIPS consist of a structural load bearing sandwich panel, generally with an oriented strand board (OSB) inner and outer face, and an insulated core which is more often

polyurethane (PUR), but can be expanded polystyrene (EPS) or polyisocyanurate (PIR). The design of SIPS means that the insulation type and thickness can vary and will depend on the required thermal performance levels combined with the footprint of the panel. A PUR or PIR core will give a thinner panel for a set thermal requirement compared to an EPS core. The inner or outer face of the panel can be tailored to suit the interior or exterior finish required, i.e. render board can be used on the outer and plasterboard on the inner face, but this will be dictated by the end user requirement.

SIPS can be tested as wall, floor or roof panels and tend to excel in their racking performance and wind load resistance, however they tend to have a lower safety factor when tested under compressive axial and eccentric loading.

The key to a good functioning system onsite is the airtightness of the panel joints – this

IMAGE:
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