



## Adhesives and manufacturing systems for volume SIPs production

### Project Brief

Innovaré Systems Limited, part of the Osborne Group, wanted to set up a new 33,000 ft<sup>2</sup> factory to manufacture the i-SIP structural insulated panel system.

Each panel which can be up to 6 m long is designed and manufactured as a bespoke product for each customer. The production line design incorporates a unique set-up which ensures a rapid production cycle that is geared to clients' individual build programmes.

To enable Innovaré to offer their customers this unique service with minimal lead time it was imperative that the manufacturing operation was set up to deliver this level of flexibility.

Apollo Offsite were called in to recommend a suitable adhesive bonding system and process.

### Project Type/Application

The adhesive technology to enable continuous process, fast bonding of the panels was critical to the production process and Apollo Offsite was central to this new technology development.

As a result of rigorous testing at Apollo a new adhesive technology was developed that met the exacting criteria for the Innovaré facility. The new adhesive, Apollo Fastack, is a two component high strength, structural polyurethane adhesive that combines fast cure rates with a high degree of initial green strength and tack.

The high level of tack is sufficient to enable the i-SIP panels to be consolidated by means of platen presses at the end of the new production line thus eliminating the need for batch curing in presses and dramatically speeding up production.



## Outcome/Result/Success Factors

Once the new adhesive system had been proven, Apollo Offsite designed the complete adhesive application system for Innovaré and worked with the production equipment manufacturers to ensure trouble free installation.

The plant is now capable of manufacturing a 6m long i-SIP panel every 12 minutes.

The i-SIP product with the all important Apollo Fastack adhesive has been tested by the BBA and awarded an Agrément Certificate verifying the long-term structural performance of the i-SIP system.



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