



WALLTITE[®]

The airtight insulation solution

New build timber frame apartments

Best Practice Case Study



 **BASF**

We create chemistry

New build timber frame apartments

Best Practice Case Study



Project data

Project: Residential developments, SE England

Client: Premier Penthouses

Architect: Premier Penthouses

Spray Foam Contractor: Total Insulation

Scope of Project: Various low-rise apartment blocks

Year Completed: Ongoing

Products Used: WALLTITE spray foam insulation

Project description

Originally specialising in the addition of penthouse apartments to existing buildings, Premier Penthouses now finds that the majority of its work comprises the development of low to medium rise apartment blocks in Kent and Sussex.

Effective thermal insulation combined with reliable air tightness is key, with the developer working to more demanding standards than those currently required by Building Regulations.

Challenges

The company uses timber frame construction methods. In this system, insulation is applied to the interior face of the infill panels between the timber studs. The challenge is to create a completely airtight insulating layer. It is critical that the insulation fits precisely between the timber studs. Any gaps, however minor, can constitute thermal bridges that compromise the U-values as well as breaching the air tightness of the building fabric.

Solution

WALLTITE spray foam insulation is used as a standard component. It is sprayed directly onto the timber panels where it forms an airtight insulating layer.

WALLTITE is applied in liquid form that develops into a closed cell rigid foam on contact with the substrate. Once applied, the WALLTITE is permanently bonded to the substrate and effectively becomes part of the structural element.

Because of its spray application method, WALLTITE will mould itself to any wall shape or any surface irregularities, ensuring there is no possibility of gaps that would compromise air tightness performance. This is particularly valuable at vulnerable points of a structure such as the joints where wall insulation meets the insulation of the roof and the technical team at WALLTITE can provide standard specification details that outline how these areas should be treated.

Using a spray foam insulation also allows for flexibility in specification. The U-value of the wall structure will vary depending on the thickness of the WALLTITE layer applied. For Premier Penthouses, application advice has been issued that demonstrates how to achieve a U-value of 0.25 W/m²K (95mm of WALLTITE), 0.22 W/m²K (110mm of WALLTITE) and 0.20 W/m²K (130mm of WALLTITE)

Client quote

Richard McAllister MD of Premier Penthouses has made the decision to use WALLTITE on all new developments. "We find that using spray foam rather than insulating board is a far quicker solution. In some of our developments it takes as little as a single day to apply the insulation where cutting and fitting insulation board is a much more time-consuming process. More importantly, the spray foam solution ensures that we can be totally confident that we have a consistent, airtight insulation layer."

