



Press Release
August 22nd 2011

Knauf's Technical Support is Second to None

Knauf Insulation's outstanding technical support and three-dimensional calculation models helped to meet the challenging U-value needed for the external walls of CTC Kingshurst Academy in Birmingham, as part of a £10.5 million project.

The aim was to enable the academy to bring together a range of departments within purpose-built, modern teaching accommodation. In addition to a new steel frame, four-storey teaching block building, main contractors ISG also carried out a comprehensive programme of internal and external refurbishment. In terms of the insulation, the brief for sub-contractors EHS Roofing was to find a flexible product that could meet the demanding U-value of 0.22 W/m²K for the external walls.

The key to Knauf Insulation securing the project was its ability to provide in-depth technical support, including complex heat flow modelling calculations, which were carried out in accordance with the guidelines set by the BRE. The unique three-dimensional calculation support service, provided by Knauf Insulation's Technical Advisory Centre, was an integral part of the product specification process to ensure that the exact thickness recommendations were proposed in order to meet the project's specific U-value requirements.



Originally rigid foam board insulation was specified, but after the project started it became apparent that the insulation zone allowed for on the drawing was not wide enough to give the required U-value. There was also a limited cladding zone that could not be altered. It was therefore important to look to other insulation types and providers to be able to satisfy requirements.

David Parnell Consultant at EHS Roofing explains: "Having worked with Knauf Insulation before, we knew they would be able to give us unbiased advice on choosing the best insulation product for the application, to achieve the desired U-value."

The resulting solution from Knauf Insulation met all of EHS' insulation prerequisites by reducing the thickness of insulation in the rainscreen zone to 50mm of Earthwool[®] RainScreen Slab between the metsec metal stud system. This was fixed to the cement particle board in the insulation zone behind the rainscreen cladding, with 120mm Earthwool Flexible Slab between the metsec studs. A further 70mm of Earthwool Flexible Slab was then installed by the dry lining contractor in the c studs behind the internal plasterboard finish.

As David Parnell at EHS Roofing explains: "With this challenging build, the only way we could get a truly accurate U-value was to create a three-dimensional model. Knauf Insulation was the only manufacturer that could offer us this calculation service."



“Once it had been decided to use Knauf Insulation, we leaned on them heavily for technical support. As this is such a difficult specification we became a very demanding customer, requesting different calculations for all our options. Each time we were met with a quick and efficient response – their technical support was second to none.”

Earthwool RainScreen Slab is a rock mineral wool slab containing a water repellent additive, specially developed for the thermal insulation of rainscreen cladding system applications. It is lightweight but rigid enough to resist the compression forces generated when installing the insulation slabs to the masonry substrate. Earthwool RainScreen Slab is non-combustible and provides exceptional reaction to fire performance – it is classified as Euroclass A1 to BS EN ISO 13501-1, whilst delivering excellent thermal and acoustic performance, particularly suited for public buildings such as schools.

Knauf Insulation was able to reduce the thickness of insulation in the rainscreen zone by introducing insulation between the light steel frame using Earthwool Flexible Slab, a multi-purpose, flexible, friction fit, rock mineral wool slab. With outstanding acoustic, thermal and fire properties, the product is ideally suited for applications such as timber and metal studs, where the slab will friction fit between the studs – unlike a rigid foam insulation board, which can be problematic.

For more information on Knauf insulation’s unique three-dimensional calculation service please visit www.knaufinsulation.co.uk

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