

Nanogel[®]-filled rooflight

Tesco Superstore, Ramsey, Peterborough



Roofglaze Nanogel[®] rooflight for World's first zero-carbon Tesco Superstore

Following its successful installation of Nanogel[®]-filled rooflights at Tesco's Haverhill store in Suffolk, Roofglaze has again been called upon by main contractor RG Carter, to install their highly efficient rooflights at the World's first zero-carbon Tesco Superstore at Ramsey, Peterborough.

The new single storey, timber panel clad Superstore combines a variety of innovative new technologies to minimise energy consumption. The specification of the rooflights was crucial, to balance the requirement for natural light against the thermal efficiency of the roof structure.

With a U-value of just 0.89 W/m²K, Roofglaze Nanogel[®] rooflights were the obvious choice, as the thermal performance of the rooflights is virtually the same as the surrounding roof construction.

Nanogel® is a free-flowing translucent granular insulation material comprising hydrophobic silica-based particles. This is placed in the cavities within polycarbonate multiwall glazing to provide pre-assembled glazing cassettes which are quick and easy to assemble on-site and create a weight saving of up to 80% compared to typical double glazed glass rooflights.

Nanogel®-filled glazing provides an important contribution to reducing carbon emissions. Wasteful heat loss is minimised, as is the requirement for energy-hungry artificial light. To further reduce energy consumption, an intelligent dimming system controls artificial lighting relative to the ambient light level in the building.

Another important factor in the specification of Roofglaze Nanogel® rooflights, was the even lighting they provide, with minimal shadows or 'hot spots' – perfect for displaying goods in a retail environment. The Nanogel®-filled glazing also provides a 25% noise reduction (at 1,000 Hz).

The Superstore opened in December 2009 and the planned energy targets for the building have been well and truly beaten. In fact, the store actually generates energy, with any surplus being sold back to the national grid.

Phil Brightman, Project Manager for RG Carter, commented: "Nanogel®-filled rooflights have played a big part in the success of our recent projects for Tesco. The design and on-site teams at Roofglaze have worked very closely with us to ensure smooth completion of projects."

The rooflight installation at the Ramsey Superstore was started on a Sunday, to avoid any potential hold-ups normally associated with Monday mornings. This got the project off to a flying start and the whole installation and subsequent tests for air tightness were successfully completed well within schedule.

Based in St Neots, Cambridgeshire, Roofglaze Limited is a leading supplier of Nanogel® rooflights, as well as other glass and polycarbonate rooflights and skylights, with a complete range from modular domes and pyramids, to continuous barrel vaults, ridgelights, lantern lights and bespoke designs.

For further information, visit <http://www.roofglaze.co.uk>

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