

## Healthcare projects incorporate new insulation technology for high performance energy management of Facades



Jersey General Hospital in the Channel Islands and a new dental surgery in Spain are the latest of several healthcare projects which combine new aerogel insulating technology within their translucent facades.

Jersey Hospital, designed by BDK architects, uses the Kalwall cladding system which diffuses daylight evenly without shadows or glare and without the need for curtains or blinds. A similar system is used for the Clinique de Chugia Maxifacial, located on the ground floor of a large apartment block in Pamplona. Both projects incorporate Nanogel aerogel, developed by the Cabot Corporation, within the cladding panels.

Wider European use of aerogel insulating technology is the result of increased awareness by architects about how to solve the challenge of maximising daylight through walls or roofs without compromising energy efficiency. At the same time, designers recognise that aerogel technology meets the global demand for building products which save energy, are sustainable and meet the green agenda.

Nanogel aerogel is a translucent granular form of silica aerogel. Aerogel, comprising 95% air, is the world's lightest and best insulating solid material. Used within glass and other translucent walling and skylighting systems, it dramatically increases thermal insulation and greatly reduces a building's running and lifecycle costs. The unique performance of Nanogel aerogel means that architects can now design and provide large areas of energy-saving daylighting in walls and roofs which will be as energy efficient as a solid surface.

Commenting on the use of Kalwall with Nanogel at Jersey hospital, Mark Fauvel, director of BDK architects said, 'For our local Hospital Day Surgery project, we wanted to provide translucent walls that would create a tranquil environment to assist with the reawakening process whilst patients were in the recovery suite after an operation. At the

same time, we wanted to retain a sense of privacy. However, one of the problems these days is the conflict between stringent Buildings Regulations designed to save energy and the need to introduce daylight. The solution, to ensure that the building envelope met required insulation values, was to use Kalwall with Nanogel and achieve a remarkably low U value. We, our client and the patients are delighted with the results.'

New or ongoing projects across Europe embrace a host of different building types, ranging from supermarkets, through schools and public facilities, to commercial and industrial buildings. Commenting on the projects, Cabot Aerogel's Eric Ruiz said, 'Energy saving, sustainability and green issues are paramount in every architect's design and thought process. Coupled with that is the realisation that high level lifecycle performance and cost savings, particularly with the unpredictability of energy prices, are vital. With growing awareness of Nanogel aerogel, European architects are unanimous in their enthusiasm to embrace this unique new technology in their daylighting specifications.'

Technical information, building projects and downloadable publications can all be accessed by visiting [www.nanogel.com](http://www.nanogel.com)

### ***What is Nanogel<sup>®</sup> aerogel?***

Sometimes called "frozen smoke", aerogel is the lightest and best insulating solid in the world. Nanogel, Cabot's branded aerogel, is a hydrophobic aerogel produced as particles. Each particle consists largely of air (~95%) contained in nano-sized pores that severely inhibit heat transfer through the material. Nanogel particles can be contained in various ways to facilitate incorporation into a wide range of systems including pipe-in-pipe systems, LNG & cryogenic gas transportation and storage systems, insulative coatings, daylighting panels, sporting equipment, clothing, and others. Cabot produces Nanogel in a state-of-the-art manufacturing facility located near Frankfurt, Germany where it began commercial production in 2003. For more information visit [www.nanogel.com](http://www.nanogel.com).

### ***About Cabot Corporation***

Cabot Aerogel is a business of Cabot Corporation. Cabot Corporation is a global specialty chemicals and materials company headquartered in Boston, Massachusetts, USA. Cabot's major products are carbon black, fumed silica, inkjet colorants, capacitor materials, aerogel, and cesium formate drilling fluids. The website address is: [www.cabot-corp.com](http://www.cabot-corp.com).



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