



Cabot Corporation's aerogel helps US design team win overall title in 2010 Solar Decathlon Europe

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World's lightest and best insulating solid important part of winning design

(Boston, MA and Madrid, Spain) July, 2010 - Nanogel® aerogel, manufactured by Cabot Aerogel, a business of Cabot Corporation, has been instrumental in helping Virginia Polytechnic Institute and State University (Virginia Tech) win the overall title in the 2010 Solar Decathlon Europe in Madrid, Spain against stiff international competition. The Solar Decathlon, sponsored by the US Department of Energy, invites teams from around the world to create exciting self-sufficient solar-powered homes that focus on new ways of approaching energy efficiency and renewable energy in total building design. Virginia Tech beat 17 teams from 7 countries to win with their innovative *Lumenhaus* entry.

The *Lumenhaus* is designed around a system of movable panels called an Eclipsis System that can be opened and repositioned to adjust to exterior conditions or occupants' preference. The end result is a home that can be opened up using clement exterior conditions to heat or cool the interior while also allowing the occupants to redesign the space to fit different uses. The Eclipsis System uses 80 sliding polycarbonate panels filled with translucent Nanogel aerogel that not only allow the interior to be illuminated by natural daylight but do so while providing an insulation value of up to R-17, equivalent to that of a solid wall. Nanogel insulation enables superior energy efficiency, while still transmitting significant daylight. These properties, along with its Silver C2C certification from McDonough Braungart Design Chemistry make it a natural choice for green building technology, and therefore, the competition.

Robert Dunay, Director of Virginia Tech's Center for Design Research School of Architecture and the *Lumenhaus* project leader explains, "We have used aerogel in each of our previous competition entries and I am confident we will be using it in future research. Its unique ability to allow the full spectrum of beautiful translucent daylight into a building while offering unsurpassed insulation makes it a very important part of our designs."

Robert goes on to explain that their design this year mainly incorporated Nanogel aerogel in the innovative Eclipsis System, "Our use of this sustainable material allowed us to illuminate the *Lumenhaus* with natural daylight during the day and energy efficient LED lights embedded in the panels at night. The light from both sources is soft and even without shadows or glare and creates a warm and welcoming atmosphere, both inside and out. This is a relatively new building material but we see it having a 'glowing future' in sustainable architecture."

Over 1100 lb of Nanogel aerogel was supplied through Cabot Aerogel customers VTECH Industries, DuoGard Industries, Inc., and Centerpoint Translucent Systems, LLC, for use in the 2009 US and 2010 European Solar Decathlon for entries from both Virginia Tech (*Lumenhaus*) and Penn State (*Natural Fusion*). For more information about the Solar Decathlon and Virginia Tech's *Lumenhaus* please go to www.Lumenhaus.com.

What is Nanogel® 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, up to 90%, 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 other products. 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.

About Cabot Corporation

Cabot Aerogel is a business of Cabot Corporation. Cabot Corporation is a global performance materials company headquartered in Boston, Massachusetts, USA. Cabot's major products include carbon black, fumed silica, inkjet colorants, capacitor materials, aerogel, and cesium formate drilling fluids. The website address is: www.cabot-corp.com.

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