

Chicago Museum of Science and Industry Exhibit Smart Home: Green + Wired

The Chicago Museum of Science and Industry recently opened a new “green” exhibit “. . . for guests to see the latest innovations in reusable resources, smart energy consumption, and clean, healthy living environments in a contemporary setting. Conceived by Michelle Kaufmann Designs, the country's leading designer of sustainable, green homes, the *Smart Home: Green + Wired* exhibit celebrates exciting new directions in sustainable living and environmentally friendly technologies for the 21st century.”

The 2,500-square-foot mkSolaire home—located on a park on the east side of the museum – was constructed in two parts. The modular three-story house was built in a factory by All-American Homes of Middlebury, Indiana. After the pre-fabricated components were transported to the museum site, Norcon, Inc., the general contractor for the Smart Home, assembled the three levels with the use of a crane and then completed the interior work and exterior green landscaping.

At the request of Daltile Corporation, MAPEI was introduced to this project to participate in the donation of a flooring system utilizing MAPEI setting materials and grouts.

The tile floors in the bathrooms were installed at the plant in Indiana using Mapelastix 315, Kerabond/Keralastic for setting and Opticolor for grouting. The Blazestone 2” x 2” wall tiles in the powder room on the first floor were made entirely from post-industrial and post-consumer glass, as were the Blazestone “Subway” 3.5” x 7.5” shower tiles in the master bath. The floor tiles in the master bath – from Terra Green Ceramics – were made with 55% recycled glass content and qualify for LEED certification points. The shower and floor tiles in the second bathroom were handmade from recycled glass, paper and low-carbon cement.

The Jurastone™ Beige limestone tiles used for the flooring throughout the ground level were set with the *Kerabond/Keralastic* mortar system to stand up to the heavy traffic from the thousands of visitors who tour the Smart Home. The tiles were grouted with #94 “Straw” *Ultracolor* grout.

On the second and third levels, the wood flooring was set with *Ultrabond 990* premium solvent-free, one-component urethane wood-flooring adhesive. SYNERGY prefinished strand bamboo flooring from Teragren was used for the bedroom and hallways because bamboo is a highly renewable material. It grows quickly – more than 90 feet in just one year. *Ultrabond 990* was chosen for this installation because the bamboo had to be bonded to the steel base of the pre-fabricated modules.

Perhaps motivated by the Smart Home, other museums and organizations around the United States are planning and incorporating “green living” displays into their exhibits; but none have so far created a real, working home complete with green landscaping surrounding the home. The Smart Home includes a green roof, a “lawn” of native plants and perennials with a porous paver system forming the walkways, and a unique vegetable garden that makes use of growing boxes to provide vegetables and herbs during three seasons of the year.

The museum's curators had originally planned to display the Smart Home: Green + Wired exhibit from May 2008 through January 2009, but the immense interest in “Chicago's greenest home” has inspired them to extend the exhibit for an additional year. MAPEI is pleased and proud to be a part of this exhibit, which mirrors our company's vision for sustainability and minimal environmental impact.