



The New American Home, Las Vegas Style

Home features gypsum concrete floor underlayment.

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Across the street from Dean Martin's old mansion and Wayne Newton's famous ranch, a new breed of Las Vegas mansion rises from the desert sand. The New American Home 2009, co-sponsored by the National Council of the Housing Industry (NCHI) and Hanley Wood's BUILDERS magazine, is the first house built in the new exclusive Marquis Las Vegas community.

The New American Home is an annual concept home featuring new products, technologies, and design ideas, and is a highlight of the International Builders' Show. This year, the \$4 million, 9000-square-foot home embodies resort-style living and was sold before it was even completed.

The Marquis home is a net-zero energy home with passive and active solar elements, such as strategic use of shade and photovoltaic cells. Energy-efficient features include an insulated concrete wall system and a natural gas-powered mechanical HVAC system.

A firm foundation

On the second story, more than 1700 square feet of Firm-Fill 3310 gypsum concrete floor underlayment and Sound Mat II, manufactured by Hacker Industries of Newport Beach, Calif., provide a rock-solid surface underneath the finished floor covering. The products were specified for the second floor to help reduce vibration noise between the floors.

The combination of Hacker's Sound Mat and Firm-Fill products raised the sound control ratings above the levels most building codes require. The gypsum concrete also provides its own soundproofing qualities, eliminating nail pops and squeaks that are common with plywood subfloors.

Firm-Fill's high compressive strength—2000 to 3300 psi—lends durability to the flooring. Not only does its strength contribute to sustainability, but a gypsum concrete underlayment adds to the home's aesthetics.

To meet the aggressive construction schedule, Hacker's licensed applicator installed the subfloor in just two days. Workers placed a perimeter isolation strip around the rooms to reduce flanking paths, rolled Sound Mat II onto the surface, and sealed the seams with tape.

The rubber mat adds a sound-reducing layer between the subfloor and floor underlayment. ASTM C627-93 rates it for light commercial and residential use.

On the second day, the crew poured a 1-inch layer of Firm-Fill 3310 over the acoustical mat. They mixed each batch of the gypsum concrete under-layment onsite with sand and water to yield a lightweight, high-strength slurry. They then pumped it into place and screeded it to a smooth finish.

Its rapid set



Firm-Fill 3310 poured gypsum concrete underlayment and Sound Mat II recycled rubber pad add strength and sustainability to the 2009 New American Home in Las Vegas.

time allowed workers to walk on the floor within 90 minutes so others could continue their work and keep the project on schedule.



Adding the rubber Sound Mat II as part of the floor underlayment dramatically improves sound control.

After proper ventilation and testing for dryness, the finished flooring—16-inch Daltile travertine tile—was installed within 14 days.

The The Great American Home Task Force was also impressed with the green attributes of Hacker's underlayment products. Sound Mat II, made of 100% recycled rubber, and Firm-Fill 3310 both contribute to LEED recycled content credits. The Firm-Fill and washed masonry sand used to mix the product were both manufactured in Las Vegas, contributing to regional materials LEED credit.

For more on the New American Home, visit www.buildersshow.com. For information about Hacker Industries, see www.hackerindustries.com. Check www.concreteconstruction.net for more links.

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