

# CASE STUDY

Weiss Building & Development LLC, Illinois



## PRODUCTS USED

Knauf Insulation  
EcoSeal® System

## PROJECT

Weiss Building &  
Development LLC, Illinois

*"The Passive House project is really exciting. It's our best project to date because it brings together everything related to green building. With the house so tight, you really have to pay attention to health factors, which we always do – making sure every product is the healthiest choice available."*

*"Knauf Insulation's EcoSeal® really performs as a low-VOC, water-based sealant. It's competitive with SPF insulation jobs, but much lower in cost. I don't know of any other system that has the indoor air quality and the air-sealing aspects of the EcoSeal System."*

**Brandon Weiss**  
President  
Weiss Building & Development LLC



## CHALLENGE

To build Chicagoland's first passive house, NAHB Graduate Master Builder Brandon Weiss was challenged to achieve the highest possible quality structure with not only superior environmental features, but also using the best health practices. The first NAHB Master Certified Green Professional in Illinois, Weiss said, "This was our first passive house, so everything had to be just right."

Weiss thrives on helping customers appreciate the wellness and financial advantages of sustainable construction. "Customers don't always know they want to build green," Weiss says. "But when we bring up practices like superior sealing, sustainable insulation, proper ventilation and thermal bridging, they realize green construction equals quality that stands the test of time."

"With super-tight houses, anything that's going to off-gas has a bigger health impact," said the LEED AP professional. Another challenge was to incorporate

affordable, highly sustainable insulation products that achieve sub-35 HERS scores. "We needed BIBS® insulation that matches the performance of SPF insulation, but delivers better health characteristics and lower costs," Weiss said. "We also needed low VOC insulation for attics and insulating pipes."

## SOLUTION

To match the environmental-friendliness, health and high performance specs of a Passive House project, Weiss relied on the Knauf Insulation EcoSeal® System. "Knauf Insulation's EcoSeal System absolutely helped us reach our dual goals of sub-35 HERS scores and cost efficiency," he said. EcoSeal applies with an airless sprayer and creates a flexible tough seal. It also penetrates gaps and screw cavities that could undermine a passive house's super-tight exterior.

"Builders with a paint sprayer can do the job themselves, which is a big benefit for smaller companies," he said. "The EcoSeal System performs competitively with SPF insulation, while delivering better

health aspects and a much lower cost." Weiss estimates that the EcoSeal System with Knauf Insulation's Jet Stream® BIBS saved \$1.25 per sq. ft. over spray foam.

According to Weiss, another benefit is not needing to quarantine during installation or wait on a lengthy dry time like with SPF and cellulose. "EcoSeal is a non-toxic, water-based elastomeric sealant suitable for most any temperature and humidity levels," he said. Weiss insulated with a BIBS system and Knauf Insulation's formaldehyde- and phenol-free Jet Stream® Ultra Fiber Glass Blowing Insulation. "In jobs where we used wet cellulose, we would wait a week to avoid trapping moisture in walls. Anytime you can save a week with one product, that's really beneficial."

The Passive House project coincided with Weiss Building and Development's BPI certification, and Weiss' designation as a Passive House Certified Builder. "Earning the industry's most stringent energy efficiency certifications is quite an honor," Weiss said.

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