

CertainTeed Insulation Helps Greensburg School Go Platinum

Fiber Glass Batt Insulation Contributes to Highest LEED® Certification



Fiber glass insulation enhances the thermal efficiency of the building envelope, is naturally moisture resistant, absorbs excess noise and is made with high recycled content — all desired attributes for green building projects.

In the three years since a powerful tornado destroyed 95 percent of its homes and buildings, the small town of Greensburg, Kansas, has reinvented itself.

Consulting sustainable design professionals and organizations, such as the U.S. Department of Energy (DOE) and National Renewable Energy Laboratory (NREL), Greensburg city leaders, business owners and residents found ways to incorporate the maximum amount of sustainability into rebuilding their town. One of the great success stories of this well-publicized recovery effort is the Unified School District (USD) 422 Greensburg K-12 School, a 130,000-square-foot, two-story facility with capacity for 375 students ranging from preschoolers to high school seniors. One of the buildings destroyed by the tornado, the Greensburg K-12 School offered an excellent opportunity to rebuild from the ground up using green practices — with the goal, since realized, of achieving LEED® Platinum certification from the U.S. Green Building Council. One of the most important focal points of the design was the building envelope, which has a huge influence on the overall energy efficiency and moisture management of the facility.

The building envelope included 68,100 square feet of unfaced and FSK faced [CertaPro™](#) commercial batt insulation, with R-Values ranging from R-11 to R-19. This fiber glass insulation, contributed by CertainTeed Corporation, enhances the thermal efficiency of the building envelope, is naturally moisture resistant, absorbs excess noise and is made with high recycled content — all desired attributes for green building projects. Also a key component of the building envelope, structural

insulated panels (SIPs), rated from R-30 to R-40, were installed in the walls and portions of the roofing system. Combined with the fiber glass batt insulation, the panels eliminate loss of heated or cooled air through the exterior building envelope — a common occurrence with metal stud framing.

“The building envelope is amazing,” says Darin Headrick, superintendent of USD 422. “The acoustical quality in each learning space in the school has exceeded our expectations. Over time, we will be able to evaluate the building envelope’s energy efficiency, and we are confident the materials used and the design will meet or exceed our projections.”

Other green features in the school include electronic timer light switches, natural daylighting, rainwater collection, bioswales, water-efficient bathroom fixtures, wind-generated power and geothermal heating and cooling. Many of the strategies used to maximize energy efficiency in the school were based on recommendations from the Advanced Energy Design Guide for K-12 School Buildings,

FEATURED PRODUCTS

Unfaced and FSK faced [CertaPro™](#) commercial batt

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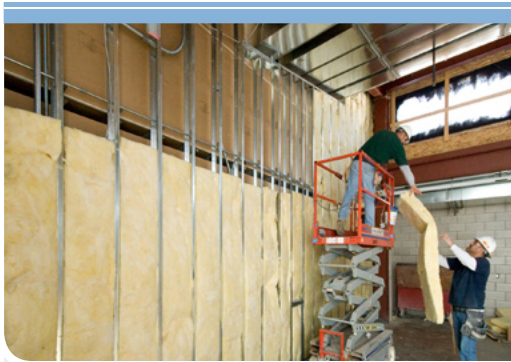
R-19 enhances the thermal efficiency of the building envelope and provides noise control.

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Fiber glass insulation is naturally moisture resistant and is made with high recycled content.

an energy efficiency guide developed by DOE and NREL in collaboration with national building and design professional societies.

“With all of these sustainable design features, we hope to have a building that proves the importance and significance of today’s design possibilities,” Headrick says. “Our students have learned so much about sustainability through this project over the past three years, and I know how excited they are about their new facility. The building is remarkable.”

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