

THE BUILDING ENVELOPE

Survey reveals home builders' quest to find the ideal weather, air, and thermal barrier

By Mike Beirne, Senior Editor

More than half of the 255 respondents in *Professional Builder's* survey said that they tried new building-envelope products or construction methods in the past two years, and 31 percent were still assessing the benefits of those new approaches. However, 21 percent indicated that they were pleased with their trials, and the specifics about what they deemed effective are briefly detailed at the end of this report.

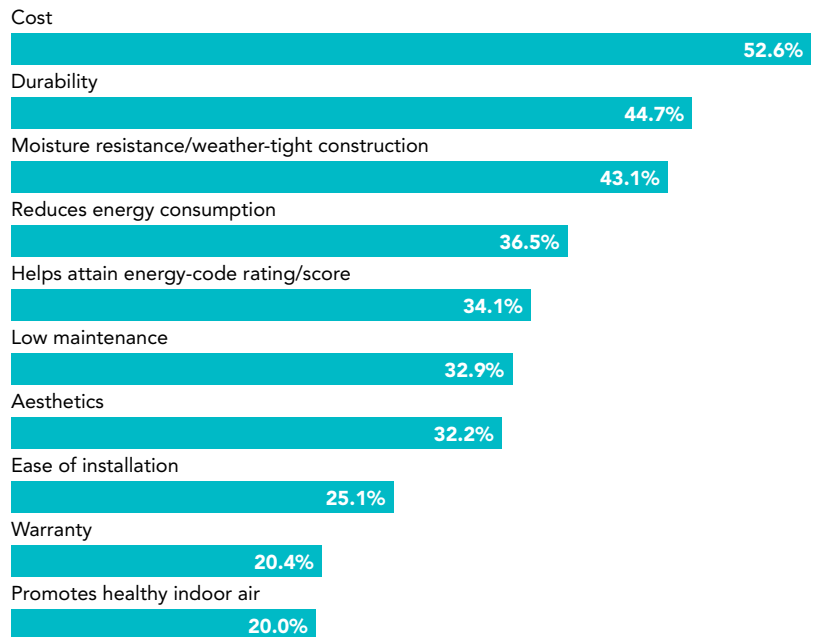
Building-envelope components are out of sight and out of mind for buyers. Consequently, only a third of builders noted that building-envelope construction was a top concern for their clients compared with 54 percent who said that other factors were more important than understanding the long-term benefits of a quality-built shell for their home. Thirteen percent indicated that the envelope was not a factor at all in their customers' buying decision.

Yet durability and energy efficiency begin with shell construction, and 61.5 percent of builders said that their companies are investing more resources in building-envelope materials and construction compared with the past two years, and 53.9 percent devoted more resources to caulking and gasketing systems for sealing.

METHODOLOGY & RESPONDENT INFORMATION

This survey was distributed between April 2 and May 1, 2015, to a random sample of *Professional Builder's* print and digital readers. No incentive was offered. By closing date, a total of 255 eligible readers returned completed surveys. Respondent breakdown by discipline: 30.3 percent custom home builder; 24.7 percent diversified builder/remodeler; 11.2 percent architect/designer engaged in home building; 10 percent production builder for move-up/move-down buyers; 4.4 percent luxury production builder; 4 percent production builder for first-time buyers; 3.6 percent multifamily; 2.8 percent manufactured, modular, log home, or systems builder; and 9.2 percent other. Approximately 58.1 percent of respondents sold one to five homes in 2014, and 18.3 percent sold more than 50 homes.

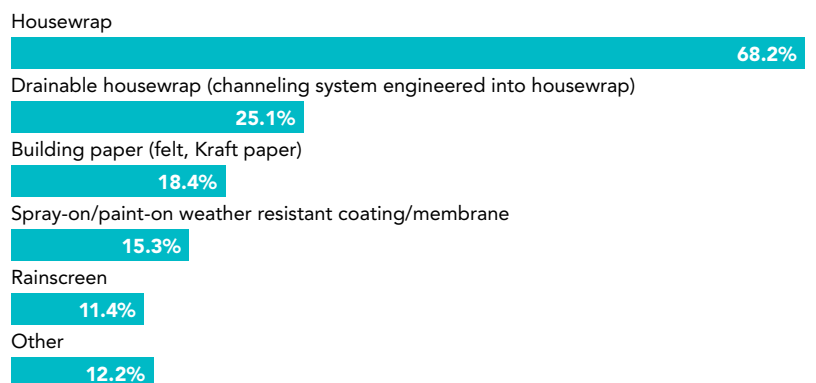
BESIDES CLIMATE ZONE AND BUILDING CODE COMPLIANCE, WHICH FACTORS INFLUENCE YOUR SELECTION OF BUILDING-ENVELOPE MATERIALS, DESIGN, AND/OR CONSTRUCTION TECHNIQUES?



Cost, durability, and the functional benefits of reducing utility bills and controlling moisture/air infiltration were the top three factors for selecting building envelope products/construction methods.

BASE: 255; PROFESSIONAL BUILDER 2015 BUILDING ENVELOPE SURVEY

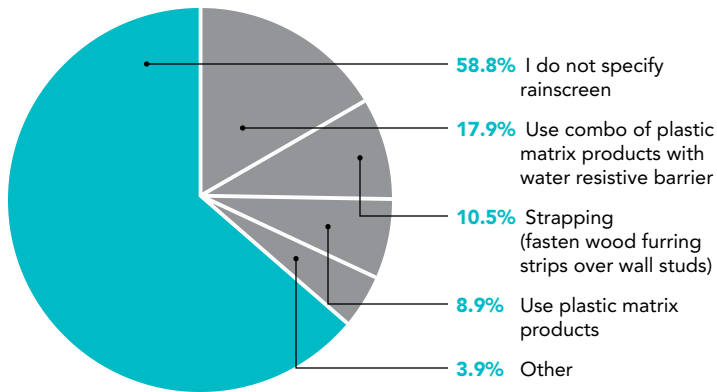
WHICH TYPES OF WATER RESISTIVE BARRIER(S) (ABOVE GRADE) DO YOU SPECIFY FOR YOUR NEW HOMES?



Zip System was the most mentioned barrier in the "other" category.

BASE: 255; PROFESSIONAL BUILDER 2015 BUILDING ENVELOPE SURVEY

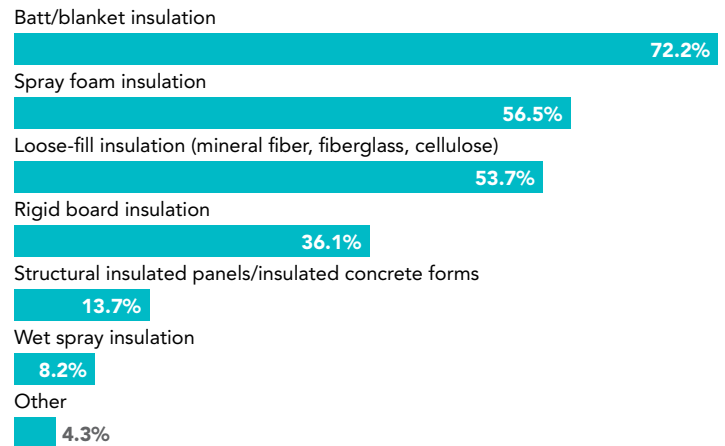
IF YOU SPECIFY RAINSCREEN FOR SOME OR ALL OF YOUR PROJECTS, WHICH METHOD(S) DO YOU USE TO CONSTRUCT AN AIR SPACE FOR YOUR RAINSCREEN SYSTEM?



The largest percentage of builders that did not specify rainscreen were from the South Atlantic and Midwest regions.

BASE: 255; PROFESSIONAL BUILDER 2015 BUILDING ENVELOPE SURVEY

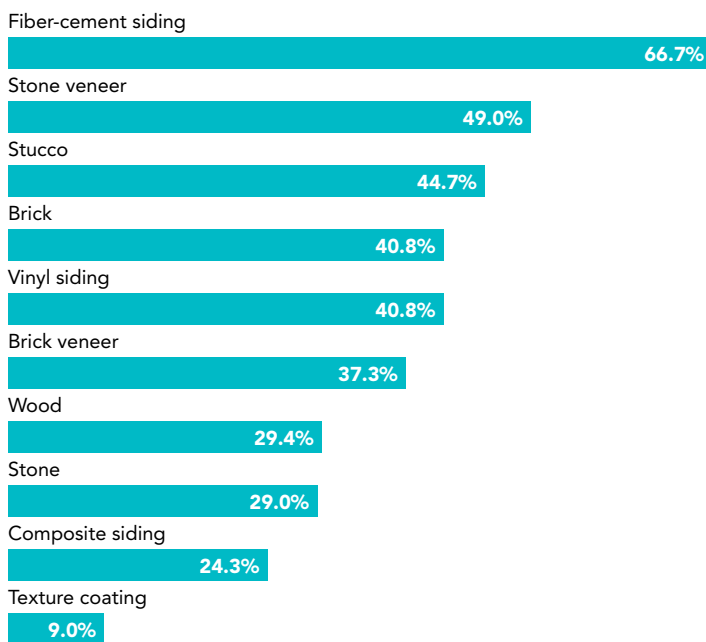
WHICH TYPE OF INSULATION DO YOU SPECIFY FOR YOUR HOMES?



Spray foam insulation continues to gain usage and took the No. 2 spot from loose-fill insulation in this year's survey.

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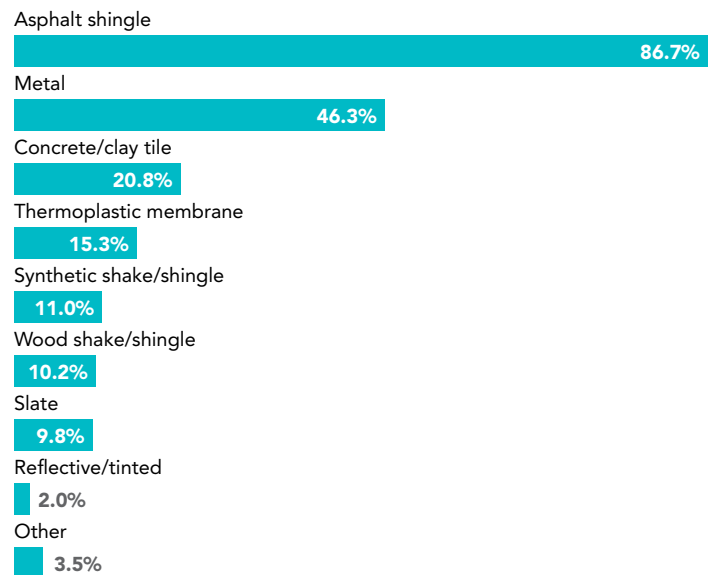
WHICH TYPES OF SIDING/EXTERIOR MATERIALS DO YOU SPECIFY FOR YOUR NEW HOMES?



The top five exterior choices were fiber-cement siding, stone veneer, stucco, brick, and vinyl siding.

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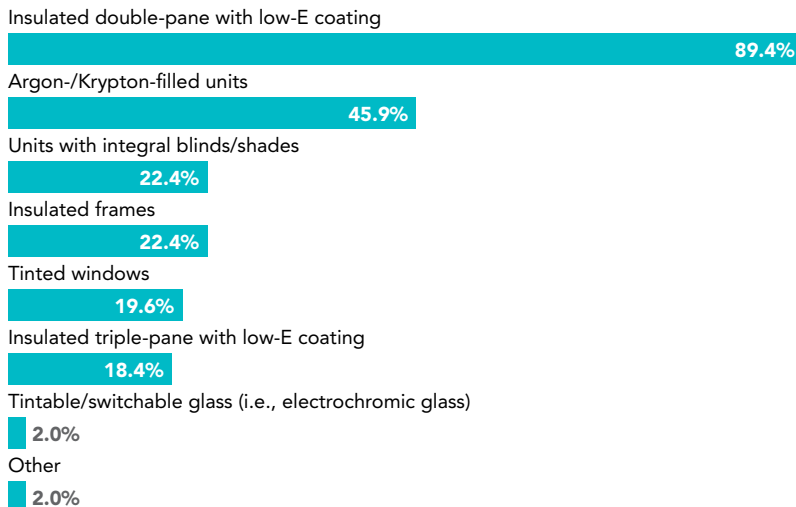
WHICH TYPES OF ROOFING MATERIALS DO YOU SPECIFY FOR YOUR NEW HOMES?



More than a third of survey respondents that use synthetic shake/shingle were custom home builders and 29 percent were diversified builders and remodelers.

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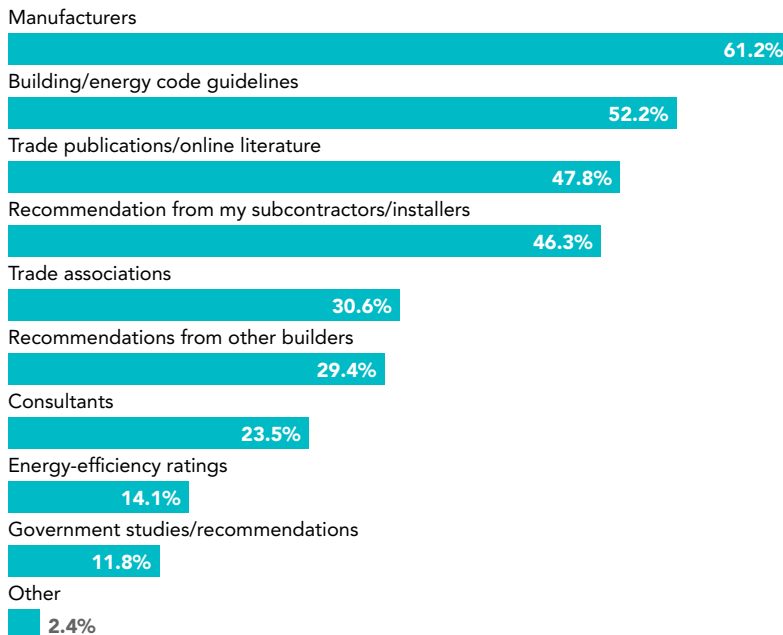
WHICH TYPE(S) OF ENERGY-EFFICIENT WINDOW TECHNOLOGIES HAVE YOU SPECIFIED IN THE PAST 12 MONTHS FOR YOUR NEW HOMES?



Windows with built-in blinds/shades surged in popularity from the bottom of choices in the 2013 survey to tie for the No. 3 spot with insulated frames.

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WHAT INFORMATION SOURCES DO YOU RELY ON IN ORDER TO CONSIDER ALTERNATIVE OR NEW BUILDING-ENVELOPE MATERIALS AND BUILDING METHODS?



Almost two-thirds of builders indicated that manufacturers have some sway over their selection of building-envelope products/construction methods.

BASE: 255; PROFESSIONAL BUILDER 2015 BUILDING ENVELOPE SURVEY

IF YOUR COMPANY TRIED A NEW BUILDING-ENVELOPE PRODUCT AND/OR CONSTRUCTION METHOD DURING THE PAST 24 MONTHS, WHAT DID YOU DO? WHAT WAS THE OUTCOME?

Pleased with the results.

Hydra Tech, I'm still old school and like the felt paper product. Some of these new membranes don't work in high wind and rain areas such as the coastal areas. We still rely on 30# paper only. (Oregon builder)

We pursued HERS rating scores rather than Energy Star and have been pleased to see other builders nationally following the same trend. (New York builder)

Staggered 2x4 studs at 16 inches off center with 2x6 plates and spray foam. (Indiana builder)

I use concrete rib construction method U.S. patent 8,429,876 B2. (California builder)

We don't trust drainage layer-only applications here on the coast, so we went to a two-layer system that comes on the same roll, HydroTex by Fortifiber. (Oregon builder)

Using Roxul R30 mineral wool cavity insulation in 2x8 walls. (Virginia builder)

We use Dow ISO board as added insulation-factor and water barrier of exterior walls. (Missouri builder)

Zip System. Used across the board and on 90 percent of roofs on homes that we build. (Georgia builder)

We follow the commercial method of insulating to the exterior with a vapor-impermeable membrane located at the sheathing layer. No housewrap, no vapor-permeable drainage/air barrier. (Massachusetts builder)

We switched to spray foam insulation; better seal and R-value. (Wisconsin builder)

ThermaSteel engineered wall system and Specification Chemicals stucco. Tightest home ever, will not burn, resists 200 mph winds, no termites, mold, virtually no maintenance. Building a resort in the Caribbean. (Texas builder)

Using sill sealer stapled to bottom of bottom plate and up the outside of the first floor walls and taping or caulking sheathing seams. First home measured 2.5 ACH; next will be better. (Oregon builder)

StoGuard fluid applied air/moisture barriers. Easy to install and effective. (Colorado builder)

We enhanced our brick installation by installing a moisture management screen behind the brick and provided additional training to masonry, siding, and framing subcontractors regarding moisture-management methods. (Virginia builder)

We used Tremco Enviro-Dri WRB and reduced air changes per hour by 50 percent. (North Carolina builder)

Prefinished James Hardie siding saves time and money. (Florida builder)