A Product Label Program for Composite Decking

By Roy Diez

Is the composite decking industry in need of a labeling program that rates the performance of individual deck board products?

The North American Deck and Railing Association (NADRA), Quakertown, Pennsylvania, believes that it is. Not only is the deck industry in vital need of such a program, according to Mike Beaudry, executive vice president of the association, the time to move forward is now.

Based on this belief, the association is currently seeking active industry support for a Consumer Product Awareness Charter (CPAC) program, first proposed at an industry conference over two years ago, that calls for testing, product performance rating, independent validation and product labeling for all composite decking. The proposed decking label program is being modeled after the performance rating system of the National Fenestration Rating Council (NFRC), which rates the performance of fenestration products in such areas as solar heat gain and light transmittance. CPAC test protocols are being developed and the program currently envisions testing decking products on solar retention, fade, end and edge swell, and slip resistance.

CPAC Label

Solar Retention – Degrees/Fahrenheit	*100 to 170*
Fade – Delta/E	*1 to 10*
End Swell/Edge Swell – Percentage	*0 to 5*
Slip-Resistance – Coefficient of Friction (COF)	*Best to Worst*

"Right now, the decking industry has nothing," says Beaudry. Consumers, he says, have to rely on the good faith of manufacturers. There are no validated performance ratings that would allow buyers to easily compare product features and select the most appropriate product for their intended use.

"Our goal," Beaudry adds, "is to create an industry label that rates product performance features, educates consumers so they can make knowledgeable product selections, and becomes a recognized seal of approval or quality. We want to promote the position to consumers that if you don't see the CPAC label on the back of the board, don't buy it."

Is product labeling really necessary?

Most players in the deck industry seem to agree that a performance labeling program would support the long term growth of the composite decking industry. The question is: does the industry really need it at this point.

For deck dealers and deck builders, the answer is a resounding, yes!

"We absolutely need it," says David Elenbaum, owner of DeckStore in Simpsonville, S.C., and co-chair of the CPAC program effort. "It's critically important to the consumer. I own a store where we sell eight different brands of products. People walk in and they want to know the performance differences, not only between brands, but between the product lines from a specific manufacturer. If they're looking for a composite deck for around a swimming pool, they want to know which products offer the highest slip resistance. If their deck will receive lots of sunshine, they're looking for products that have lower solar retention characteristics. We don't have the data to help them make a decision. All we can do is give them a brochure and tell them to pick out a color."

Deck dealers and builders are saying that a performance rating system would be extremely useful in directing consumers to products that best meet their specific needs, whether it be the best deck product for a pool deck, or the most appropriate choice for a south facing project.

The industry marketing literature in this regard, admits Lanny Jass, president of Green Bay Decking in Green Bay, Wisconsin, is "completely unhelpful." A performance rating program, Jass believes, would be a huge positive. "Such a program is way overdue," he says. "Standardize a set of tests for every deck product, certify the results and make them public."

Robert Heidenreich, owner of The Deck Store in Apple Valley, Minnesota, also likes the labeling idea. "The program absolutely sounds good. Right now there is no way to compare all the features and values of decking products. Not everyone is knowledgeable about decking. Sales people often just repeat what they are told and they don't always get it right. The [CPAC} program," he adds, "would create a standard for everyone. Carpenters and deck builders wouldn't have to rely on the word of a sales person. They could compare product features using standardized information."

Bob Lett, vice president of market development for Wolf Distribution in York, Pennsylvania, also likes the concept: "The more information you can give to the consumer, and the easier it is for them to understand what our products do and what they don't do, the better. Spread the word. A more educated consumer will help our industry grow." (Wolf is a distributor but also sells its own brand of decking.)

Getting manufacturers on board

The challenge is to get manufacturers involved.

Steve Van Kouteren, principal with Principia Consulting, is not optimistic. "This [performance labeling] was a key subject at one of our conferences a few years ago. We polled the audience and about 85 percent said it was a great idea. But when it comes to investing time and money to develop the program, the industry has fallen short."

Standards and labeling programs seem to get the most push when competitive pressure is intense or when product quality issues plaque the industry, says Van Kouteren. That period, he feels, has passed. "The industry has consolidated to a few major suppliers, the influx of poor quality imports has come and

gone, and the quality problems from the first generation domestic products are largely in the past," he says." Moreover, the current market environment, including expected growth in demand combined with excellent performance of capped composite products is not especially a motivating factor for such a program."

When composites were first introduced they took market share from wood decking. From 2007 to 2010, wood stopped the loss and started to take market share back. But since 2010, Van Kouteren notes, capped composites have made a strong push and he projects that wood will start to lose share again.

Elenbaum believes that if just a few of the major deck manufacturers get on board and add labels, others will have to follow suit. (According to Van Kouteren, five companies control 93 percent of market share). There are also several smaller firms, notes Jass that will say, "This is something we really need." A manufacturer whose product has excellent performance features will benefit from the program. They will get full credit for those areas in which their product exceeds.

"It's still a relatively young industry," notes Edie Kello, director of marketing communication for Fiberon Decking, New London, N.C. "The composites of the past have changed and they now have more features that consumers want, better stain resistant, easier to clean. Manufacturers are getting it right." Accordingly, Kello says, the time is right for a product performance rating system. "Anything that can help inform the consumer [of current product performance] - would be a good thing to do."

Stuart Dimery, national product manager for NyloBoard, LLC, Covington, GA, seconds the idea: "A product label program can be good for the consumer and the industry, if it's done fairly and there is no subjectivity to the measurements. If it adds significantly to bureaucracy or to costs (for testing, inspection, labeling), it will be a very tough sell."

"If a manufacturer says he doesn't want his product compared with others on performance, I tell them that at least with the CPAC program you will know where you stand with your competitors," says Elenbaum. "You will know what areas you need to work on to make your product better."

Putting a label on the product implies that it meets certain specifications, says Brent Gwatney, senior vice president of sales and marketing for AERT, Inc., Springdale, AR. "That's part of the reason some manufacturers resist the program," he says. The industry has had a lot of failures with composites and these firms may have had issues in the past which they've worked hard to overcome, he notes. Maybe they don't want to have to address other's specifications but would rather live up to their own standards.

"But if a guy is making a quality product," Gwatney maintains, "and if he trusts that NADRA has his best interest in mind, he's not really concerned with that."

Gwatney cautions manufacturers to look at products in other industries that are backed by a reputable agency or third party certification, such as the Underwriters Laboratory label. "That [label] goes a long way in building trust," he says. "And that's where NADRA can help. NADRA is backed by knowledge of what the product performance should be in the field. Their deck builder members understand quality. As NADRA continues to grow in consumer recognition, consumers will recognize that if a NADRA label is on [the product] then it's a product they can trust."

Competitive incentives

In the window industry, manufacturers were prodded into submitting to the NFRC rating system by the Department of Energy (DOE) and the EnergyStar program. To sell a labeling program to an industry lacking such incentives it would appear that NADRA must show that a deck performance rating program can alleviate current and future industry threats and that the lack of such a program can ultimately have a negative impact on industry sales.

The industry, for example, recently faced a threat from foreign competition introducing poor quality products at low prices. There is also competition from low-quality products made in the United States. In recent years a rash of domestic products have failed, notes Heidenreich. He estimates that 100 companies have entered the market, sold a basic product at a cheap price, and are now gone. "These products might have met ICC standards," he says, "but what good is a board that doesn't break when you stand on it but rapidly fades from brown to white?"

With a NADRA label program, people would question why these products have not been tested. "A label like this is one more way to keep cheap and untested products from making it into the market," confirms Dimery.

The lack of performance rating and continual improvement in composite decking, says Lanny Jass, Green Bay Decking, "could ultimately destroy the category."

Over the long term, the inability of deck dealers to adequately answer consumer questions can result in a lack of consumer confidence in composite products. The threat is real. Green Bay Decking's Jass believes that the lack of performance testing and rating could eventually cripple the industry.

"I think it could ultimately destroy the category," Jass says. "More than just hurt it, I think it could make it go away. Look at the products from the past ten years, few of these products still exist. Almost all of the products now on the market were introduced in the last four years. There is no history. When you're selling products that have 25 year warranties but have less than four years of actual performance history, there is a tremendous number of unknowns. Any quantified, objective data on how these products perform is something the industry needs badly."

This begs the question, continues Jass. What happens if the industry does not rate its performance characteristics and work to continually improve its products? "What if the current crop of products has the same outcome? What if, after ten years in the market, people find out that these products don't work, that there are problems with delamination, discoloration, or surface degradation? What will be the next generation of [composite] products and will contactors and consumers accept them?"

For more information or to join the NADRA CPAC effort, email Info@NADRA.org.

[NOTE: In addition to those interviewed for this article, comments were requested from individuals representing several additional large volume decking manufacturers. These individuals either declined to comment or did not respond.]

[SIDEBAR]

Developing Testing Protocols

Many composite decking manufacturers currently test such characteristics as abrasion, wear, slip resistance, and fade resistance, and some put products in an acceleration chamber to test performance over time, says Heidenreich. But manufacturers generally do not publish this data. Some producers provide Delta E ratings that indicate fade resistance, base color fastness claims on the Hunter color scale, or note that products meet ADA (Americans with Disabilities Act) slip-resistance guidelines.

Most producers also do internal tests on structural and safety performance and submit test data to an evaluation company such as the ICC (International Code Council) Evaluation Service which provides an ESR Report or ATI which provides a CCRR (Code Compliance Research Report). These standard documents are available to the public. However, they primarily rate only the structural, durability, and surface-burning performance of a product. There currently are no real standards or tests for non-structural characteristics, no uniform ratings or third-party validation of such significant performance characteristics.

“While most reputable manufacturers test above and beyond ICC AC174 requirements,” says Dimery,” it is not always easy to find the information to allow a consumer to make apples to apples comparisons. For items like fade, coefficient of friction, and thermal expansion there are multiple scales and test standards in use. This can make it difficult for a consumer to be sure comparisons between products are meaningful. For properties such as heat gain there does not appear to be an applicable laboratory based test standard. This means that there is room for subjectivity and differences in how results are obtained.” Making the code report number part of the label, he adds, will alert consumers to products that don’t have it.

Accounting for different products, different locations

One hurdle has been agreeing on which characteristics to test, says Heidenreich. There are inherent differences between various decking product categories – wood plastic composites (WPCs), capped composites, PVC, hollow PVC, and hollow hybrid products. Each product has its own strengths and weaknesses.

For example, wicking can be a concern on wood plastic composites and capped WPCs, but not with PVC products. PVC products, on the other hand, can be subject to plasticizer migration and fade issues. Edge swell and surface delamination issues are different for laminated or capped stock products and cellular PVC products. And hollow decking products have inherently lower thermal retention than other products.

“The things that happen to each different type of product when put under duress are different and some of the measurements and data you collect will look different,” agrees Jass, “but you still have to test each product the same.” Lett concurs. You have to test across the board and let buyers choose what works best for their particular circumstance, he says.

Gwatney also believes that tests have to be standardized. However, he feels that products are different and should be tested differently. For example, a standard composite, a capped composite, and a PVC board have different fade rates and should be tested differently.

Regional distinctions could also be considered in a product labeling program. After all, the importance of thermal absorption and heat retention can be very different in Arizona than in Minnesota and products could be rated on regional appropriateness. But again, Lett believes that national, uniform testing would work best. “Let the market make the choice,” he says. “If you’re in northern Minnesota, a solar retention rating may not be that big of an issue. But if you’re in Miami, you will pay really close attention to it. You don’t want a pass or fail grade, you want a rating system.”

In addition to the test areas being proposed for the NADRA performance rating program, Jass envisions additional, aggressive test protocols. “Most manufacturers have some sort of specification to pass building code requirements,” he says, “but those don’t really speak to the long term performance of decking. They show that a product meets structural requirements, but they really don’t put boards through such things as long term water soaking cycles and most don’t test products all the way to destruction. Aggressive tests designed to determine how products fail could be performed. These would tell consumers more about what they can expect.”

Standardized tests, third party testing

Most agree that for a performance rating program to work testing methods and protocols have to first be standardized.

The CPAC program was first proposed at a Principia Consulting, LLC, conference in 2011 and NADRA was selected to develop the concept. Last year, NADRA featured the product labeling idea at a meeting of its Minnesota chapter. Third-party testing experts were invited to give presentations on corrosion, environmental, flexural, mechanical, and live load testing. Code officials and a representative from the ICC-ES answered questions concerning codes and product evaluation. According to a report on the NADRA website, the 2013 meeting concluded with the following consensus: “Quality and approved tested products are a must! Whether it is ICC-ES, CCRR or ASTM tested products…..the world of product testing is convoluted and there is a need for industry standardization.”

Two testing procedures that would be administered by NADRA are being considered, according to Elenbaum. In one, manufacturers would pay to have their decking products tested by an approved, third party laboratory. An alternative approach would be to have decking manufacturers submit the results of their product testing. NADRA would audit the firm’s testing equipment and procedures to verify the results.

On this issue both Lett, a decking distributor, and Jass, a decking manufacturer, agree. “If you want consistent data,” says Lett, “you have to have third party testing.” Jass concurs: “There really has to be a third party. An independent testing agency is necessary,” he says, because “there are too many ways to manage internal tests to get the results you are looking for.”

“Third party testing,” says Fiberon’s Kello, “is always more objective, more unbiased and a more standardized way to do it. As long as the cost to manufacturers isn’t prohibitive it would be the thing to do.”

If you standardize the tests, Jass believes that a University lab could be found that would have the capability to do the testing at a fairly reasonable cost. In fact, according to Elenbaum, initial investigations show that third party testing of a manufacturer's full catalog of products could be done for an little as $20,000.

It's also possible, Heidenreich suggests, that the industry could work with ICC to have test levels for such characteristics as fade and solar retention included in ESR Reports.

Marketing the label

Creating a rating and label program is the first step. Consumers also have to be educated on the significance of the label. NADRA must work to market a CPAC label to consumers and decking manufacturers must be willing to consider secondary branding of the labeling program, such as including the CPAC label in collateral materials.

The decking industry spends millions of dollars in marketing each year, says Gwatney. "It's no big deal and real easy to market a NADRA product label. We already put an 'Affiliated with NADRA' label on a low our materials.

"We're all fighting for the same small group," Gwatney adds. "There are some 5,000 deck builders in the country that they're our core customers. Educating the home owner is great but educating the deck installer that he has a product that meets certain specifications and meets NADRA standards is even better."

Like EnergyStar and NFRC, Lett believes that a decking label could definitely be marketable. "If people have a good product they will want to be part of it. I think those manufacturers would be willing to include a label in their collateral material." Kello also thinks that manufacturers would be willing to promote a performance label. It could be, she adds, "sort of like a Good Housekeeping Seal of Approval."

"Those that have products that score relatively well, Jass believes, "might jump all over it." It's possible, he adds, that a third party with consumer interests in mind, such as the national home builder association, could help in advocating a deck label and assist in flying the CPAC flag.