



**PISTORINO & ALAM**  
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March 21, 2011

Mr. Rick Dixon, Executive Director  
**Florida Building Commission**  
2555 Shumard Oak Boulevard  
Tallahassee, Florida 32399-2100

**Re: Florida Building Commission Proposed Rule Changes**  
**Proposals referenced in January 19, 2011 letter from Jorge L. Cruz-Bustillo**  
**High Velocity Hurricane Zone Code Requirements to Revise 1521.18.1**

Dear Mr. Dixon:

I have read with great interest the above referenced letter written to you in behalf of Somay Products, Inc. where in there is a proposal to revise the above-referenced code provisions to allow a elastomeric coating to be placed on Asphalt and Composition Shingles. I was unaware of the meeting on February 1, 2011 in Tampa at the time or I would have attended to express my objection.

As you may remember, I was chairman of the Roofing Committee in Miami-Dade County that originally formulated the roofing chapter 34 in the South Florida Building Code in 1998 that was carried over as Chapter 15 High Velocity Hurricane Zone of the Florida Building Code (FBC). Further, I was the consultant for the South Florida Building Code (SFBC) from 1974 thru 1993 and was involved with drafting the specific code provisions having to do with PUF and elastomeric coatings that first appeared in the 1988 Edition of the SFBC.

The reasons for my objection to allowing elastomeric coatings on shingle roofs is that in the late 70's and middle 80's a series of complaints were made to the Dade County Building Department by single family home owners regarding leaking roofs were an application of an elastomeric coating had been performed. The Board of Rules and Appeals requested that I, together with the County's code enforcement officer investigate the claims. After performing inspections on homes it became apparent that water was being trapped and condensing on the underside of the elastomeric coatings therefore, keeping the roofing assembly in a damp condition. This created a condition supporting wood fungi leading to wood decay (rot) as well as accelerated the corrosion of the roofing fasteners.

We, (Dade County Board of Rules and Appeals, roofing inspectors and members of the Product Control Department) conducted meetings with members of the PUF and Elastomeric Coating Industry for the purpose of establishing criteria for permissible application and building permit requirements. In the process there was overall consensus that applications over discontinuous roofing systems such as asphalt, composition and wood shingles would be detrimental. Therefore, this probation first appeared in the 1988 Edition of the SFBC.

After Hurricane Andrew in 1992 I was requested to chair the rewriting of the roofing chapter 34 as a result of a law suit between members of the Florida Roofing/Sheet Metal Contractor's Association and Miami-Dade County. This process took approximately 2 ½ years wherein every aspect of the roofing code was considered in detail. Representatives from industry attended regular meetings that were scheduled every Wednesday. Once again, when the issue of elastomeric coatings being applied to asphalt and composition shingles came up, it was very clear that a unanimous consensus was reached that such applications should be prohibited. The consensus came not only from shingle manufacturers but the elastomeric manufacturers as well.

I have not seen any documentation that would otherwise provide evidence that the application of elastomeric coatings are not damaging to the roofing systems and assemblies especially when it comes to composition or asphalt shingles. In fact, a recent review of shingle manufacture's literature supports my concern that nothing has materially changed. (See attached industry and manufacturer's publications).

I have read the introduction paragraph of Mr. Cruz-Bustillo's letter wherein he states that the product approval was granted to a product known as "SOMAY ROOF MATIC" SEALER 7 PROTECTOR on January 14, 1974 and has approved for use on asphalt shingles. However, the product approval attached for Somay #842 "Roof Mastic" Coating has a limitation listed on page 3 as follows:

NOA No 08-0717.04

*Limitations*

3. *Somay Products #842 "Roof Mastic" shall not be applied over asphaltic shingles*
4. *Somay Products #842 "Roof Mastic" used on Tiles shall be applied such that the headlaps are not 'filled' or 'clogged' with coating material, so as to maintain an air-permeable tile roof.*

Note that even when the product is permitted on tile roofs it must be installed in such a way to allow the roof to "breathe" and dry out.

I am of the opinion that if the elastomeric roof coating manufactures' believe that such coatings are not detrimental to existing roofing assemblies and roofing systems when applied, then such documentation to that effect should be presented.

In my experience the detrimental effects can manifest themselves in a time frame as short as one (1) year or a longer period of eight (8) years. Competent scientific documentation needs to be developed to show what exactly the effects are for both long term and short term applications when a low vapor, low perm rated elastomeric coating is made.

Damage to existing buildings may take some time to occur and unsuspecting homeowners that are adversely affected may have no recourse on damage claims as the statute of limitations may run out.

### **Testing or Demonstration Program**

I recommend that the industry (elastomeric coatings manufactures) work with the shingle manufactures to set up a protocol for the data collection on a statistically viable sample of Demonstrational homes.

This type of evaluation does take time in that a statistical sampling program of selected new roofing coating applications is made on new shingles and decks. Monitoring devices are set up to provide information pertaining to moisture activity over a period of several years. Such data should be obtained from an independent laboratory such as Factory Mutual.

I recall that researched homes were built by Masonite in West Palm Beach and a monitoring program was in acted by HUD to determine if hardboard siding was the cause for decay in wood frame housing in Florida. A computer generated monitoring system was set up and data could be recorded in remote offices including Washington, D.C.

I am aware of a program wherein the coating of roofs with white elastomeric products is being presented by FPL as an energy saving method to reflect light and reducing heat in attics. I do agree that white roofs are beneficial to reducing the cost of energy in Florida when it comes to cooling the interiors of homes. However, most of our roofing systems are designed to "breathe" and to dry out naturally so that any moisture entrapped between the roofing and wood deck can turn to water vapor and be discharged.

### **New Homes and Re-roofing**

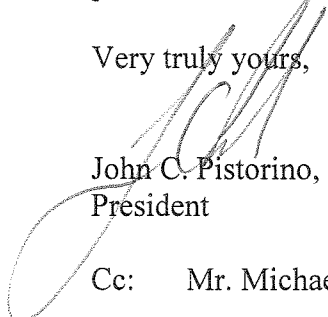
New homes could be given some kind of energy credit if the owners specify white roofs for construction. In Miami-Dade County since the 1940's the norm for concrete tile roofs was a white paint application that had to be repainted from time to time to eliminate algae and mildew. Built-up roofing (BUR) with gravel applications also consisted of a white paint applied for aesthetics and cooling. Shingle roofs also had applications of white granules for the same reasons. However, architects have influenced homeowners with darker roofing applications due to the availability of a multitude of available color selections. It may be very beneficial to instigate a program wherein the re-roofing of an existing building or residence has some criteria for going with white roofing materials.

Mr. Rick Dixon  
Florida Building Code Commission  
HVHZ FBC 1521.18.1  
March 21, 2011  
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### Summary

I am very much concerned that the wholesale application of elastomeric coatings to roofing systems that are intended to "breathe" and naturally dry out will be detrimental to wood sheathed roof decks. My experience has been that such applications result in decay to wood decks and the premature corrosion of roofing fasteners due to the constant presence of moisture.

Very truly yours,



John C. Pistorino, P.E.  
President

Cc: Mr. Michael L. Goolsby, Miami-Dade County Board of Rules and Appeals



# technical bulletin

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Manufacturers Association

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## *Field Coating of Installed Asphalt Shingles*

ARMA strongly advises caution when considering the application of any type of field applied coating over installed asphalt shingles. There are many types and formulations of roof coatings so it is important to always consult the shingle manufacturer before proceeding with any type of coating. Be aware that some asphalt shingle manufacturers specifically disallow field coating of their manufactured shingles. Additionally, state or local building codes may not approve this practice as the field applied coatings will drastically change the aesthetics of the roof and may change the performance characteristics of the roof assembly.

Problems reported after asphalt shingle roofs have been field coated include unsightly curling and/or cupping of the shingles which may lead to premature failure and leaks. In addition, non-permeable roof coatings may create a vapor retarding layer; if this occurs, it increases the possibility of rotting of the roof deck caused by moisture accumulation in the attic space.

It has been suggested by some that the use of field applied coatings over existing asphalt shingles will produce overriding benefits to the home owner – such as longer roof life, energy-use reduction (solar reflectant versions), or remediation of small roof leaks. There is little or no available documentation showing the extent to which the field coating of asphalt shingles provides any of these benefits, but the risks and concerns mentioned above remain very real.

When considering coating of installed asphalt roof shingles, be sure to:

- Obtain approval from the asphalt shingle manufacturer before proceeding with a specific roof coating.
- Check with the local building department to determine whether this application is allowed.

**DISCLAIMER OF LIABILITY:** This document was prepared by the Asphalt Roofing Manufacturers Association and is disseminated for informational purposes only. Nothing contained herein is intended to revoke or change the requirements or specifications of the individual roofing material manufacturers or local, state and federal building officials that have jurisdiction in your area. Any question, or inquiry, as to the requirements or specifications of a manufacturer, should be directed to the roofing manufacturer concerned. **THE USER IS RESPONSIBLE FOR ASSURING COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.**

Nothing contained herein shall be interpreted as a warranty by ARMA, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose or non-infringement. **IN NO EVENT SHALL ARMA BE LIABLE FOR ANY DAMAGES WHATSOEVER, including special, indirect, consequential or incidental damages or damages for loss of profits, revenue, use or data, whether claimed in contract, tort or otherwise. Where exclusion of implied warranties is not allowed, ARMA's liability shall be limited to the minimum scope and period permitted by law.**



# Steep Slope Technical Point

**TO:** Steep Slope Sales Team, GAF-Elk Contractors, GAF-Elk Distributors.

**FROM:** Contractor Services

**No:** 151-09

**DATE:** 02/06/09

**SUBJECT:** *Field Coating of Installed GAF-ELK Asphalt Roofing Shingles*

<p><i>Can Coatings Be Applied To Installed Asphalt Shingles?</i></p>	<p><b>Not Recommended...</b> GAF-Elk does not recommend field application of coatings to asphalt roofing shingles and cautions that this type of application can have adverse affects on asphalt shingles. <b>Not Tested...</b> There are many types and formulations of roof coatings being marketed. GAF-Elk has not evaluated these for use on asphalt roofing shingles and can not accept any responsibility or liability for their use. <b>Before Coating An Asphalt Shingle, Use Caution...</b> Thoroughly investigate all aspects of this type of application before applying a field coating to asphalt roofing shingles. Consult a qualified design professional to assess potential roof system performance issues, such as ventilation or permeability.</p>
<p><i>Why Would You Field Coat An Asphalt Roofing Shingle?</i></p>	<p><b>Coating Manufacturers' Claims Include:</b></p> <ul style="list-style-type: none"> <li>• <b>Longer Roof Life...</b> Life of a weathered shingle roof can be extended by coating the roof.</li> <li>• <b>Energy Savings...</b> Reflective coatings can reduce roof temperatures that reduces air conditioning load.</li> <li>• <b>Repair of Small Leaks...</b> Small leaks can be repaired by coating the roof.</li> </ul> <p><b>These Claims Are Unsubstantiated by GAF-Elk...</b> GAF-Elk has not evaluated or substantiated these claims.</p>
<p><i>What Are Some Of The Problems Associated With Field Coating Asphalt Shingles?</i></p>	<p><b>Aesthetics...</b> Coatings will drastically change the appearance of the roof. <b>Fire Rating...</b> GAF-Elk fiberglass asphalt shingles are UL Class A listed for fire resistance. If a coating that is not UL listed is applied to a roof, the roof will no longer be UL Class A listed. <b>Shingle Performance...</b> Some coatings have been reported to cause asphalt shingles to curl, cup, crack, split or blister that can result in premature failure and leaks. <b>Compatibility...</b> Some coatings can soften the asphalt in shingles and cause it to slide or drip down the roof. <b>Moisture Entrapment...</b> Depending on the coating, it can act as a vapor retarder and interfere with moisture vapor flow through the roof system. This can trap moisture in the roof assembly or attic space resulting in deck rot and/or mold growth. <b>Code Compliance...</b> Some local building codes and homeowners' associations do not approve of coating installed asphalt roofing shingles. Check with local building departments or other authorities having jurisdiction in your community before coating your roof.</p>
<p><i>Is My Warranty Affected If I Field Apply A Coating To My GAF-Elk Asphalt Roofing Shingle?</i></p>	<p><b>No, the GAF-Elk Limited Warranty for the shingles will remain in effect.</b> However, any damage, such as but not limited to curling, cracking, splitting, or blistering that results from the application of the coating is the responsibility of the owner and is excluded from GAF-Elk's responsibility under the terms of our Limited Warranty.</p>
<p><i>Where Can I Get More Information?</i></p>	<p><b>GAF-Elk Technical Services can assist you...</b> with these and other questions you may have regarding your roof installation. GAF-Elk Technical Services can be contacted at <b>800-ROOF-411 (800-766-3411)</b>. Also, <b>the GAF-Elk website is a great resource</b> for just about any question you may have or for additional information you may require. That site is at: <a href="http://www.gaf.com">www.gaf.com</a>.</p>



February 25, 2009

Re: Warranty

To Whom It May Concern:

What Is Not Covered:

Damage to the product due to any cause not expressly covered herein. After our shingles leave our manufacturing facility, they are subjected to conditions and handling beyond our control that could affect their performance. This warranty does not cover any problems with nondefective shingles caused by conditions or handling beyond our control.

Some examples of conditions not covered by this warranty include:

1. Acts of God, such as hailstorms and winds in excess of wind levels listed in the chart at the end of this warranty;
2. Damage to or failure of the shingles as a result of damage to or the failure of the underlying roofing structure;
3. Foot traffic on your roof or damage caused by objects (such as tree branches) falling on your roof;
4. Improper or faulty installation of your shingles. Installation must be in accordance with our written installation instructions;
5. Discoloration caused by algae, fungi, lichens or cyanobacteria (unless covered under the section "What About Algae Resistance" that follows);
6. Inadequate ventilation or roof drainage. If you have any questions about appropriate ventilation requirements, please contact us at 1-800-ROOFING;
7. Settlement of the structure of your home or buckling or cracking of the deck over which your shingles are installed;
8. Damage to the shingles caused by alterations made after completion of application, including structural changes, equipment installation, painting, or the application of cleaning solutions, coatings, or other modifications;
9. Labor costs incurred after the Tru PROtection® coverage period has expired; and
10. Any costs that you incur that are not authorized in advance by Owens Corning.

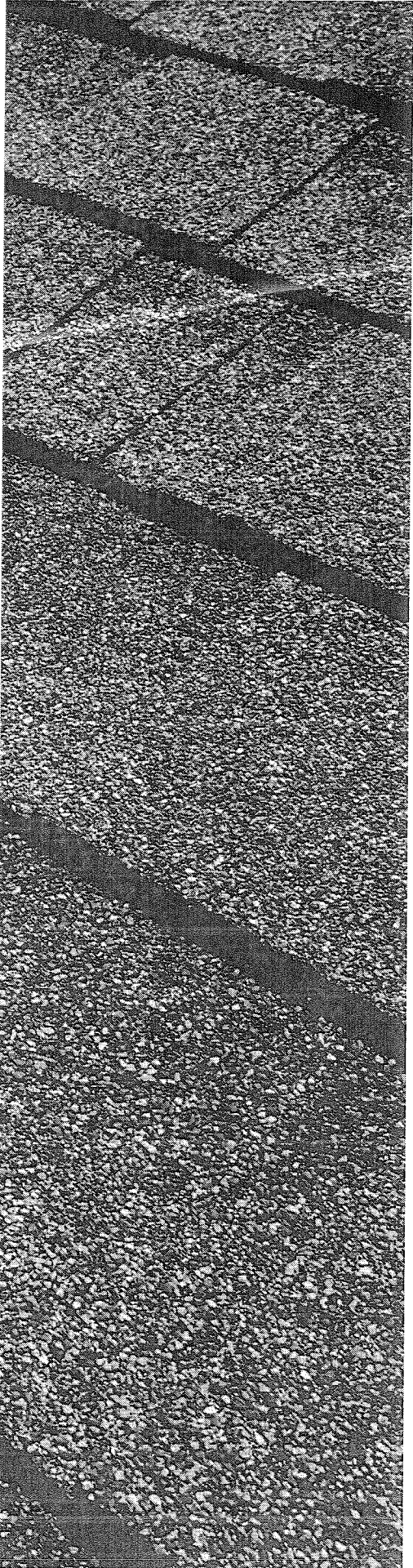
Mel Sancrant  
Roofing Specialist

Owens Corning



Myth  
Busting





## The risks and unverified benefits of field coating asphalt shingles

by Maciek Rupa

The North American roofing industry is witnessing increasing popularity of numerous technologies aligned with the sustainability movement. Among these, roof coatings are receiving significant publicity from different groups capable of influencing consumer sentiment, including government policymakers, conservationists and coatings manufacturers.

For example, sustainability advocates identify reflective roof coatings' use as a cost-effective way to reduce building energy consumption in hot climates and control the heat island effect.

Roofing professionals long have recognized the viability and advantages of roof coatings for surfacing bituminous weatherproof roof membranes used as part of low-slope roof systems and possess a great deal of experience with coating applications over roof membranes. This is not the case with field coating steep-slope roof coverings. The fact is the most widely used steep-slope roof covering—*asphalt shingles*—is not designed to accept or require field-applied surfacings.

Coating products and paints advertised as suitable for application to asphalt shingle roof systems currently are available and marketed primarily to do-it-yourself homeowners. Promotional materials for most of the products position field coating as a cost-effective way to extend asphalt shingle roof system life. Language suggesting leak repair and energy-cost savings resulting from the use of reflective coatings also commonly is used.

Homeowners may consider field coating asphalt shingle roof systems more appealing than reroofing and seek information from roofing professionals. The following information is intended to assist roofing professionals who may be in a position to answer consumer questions related to field application of coatings over asphalt shingle roof systems.

## Advertised benefits

Marketers of coatings for application over asphalt shingles claim their products offer a range of benefits though specific claims vary depending on the product. To learn about products' advertised benefits and evidence used to validate those benefits, I collected information from 10 Web sites promoting coating products for application over asphalt shingles.

The most common claim states field-applied coatings extend asphalt shingles' service lives. Other advertised advantages differ depending on product and range from simply "improves a roof's appearance" or "ultraviolet-resistant" to more specific claims, such as "rejuvenates shingles" or "fixes granules in place," to more radical claims, such as "repairs leaks," "forms a waterproofing membrane" or "reduces energy costs."

Arguments used to support the marketing claims are based on before and after photographs of roof systems, consumer testimonials and additional reassuring language published on coating suppliers' Web sites. Searches for test or laboratory evaluations of natural or accelerated weathering studies turned up no independently prepared test or laboratory reports that could validate many of the claims made in the online marketing materials.

## Coating composition

A majority of coatings advertised for use on asphalt shingle roof systems share a

common binder system. Information I collected from supplier Web sites indicates most of the coatings use a water-dispersed acrylic polymer binder commonly called latex or acrylic emulsion.

Many acrylic binder systems have proven performance in low-slope roof coating applications. Various acrylic binders are used in a range of successful elastomeric roof coatings, which display various degrees of elasticity, hardness, durability and permeability. Regrettably, physical property information is not consistently provided for the acrylic coatings I investigated. Notably, the promotional language in almost all cases claims products are vapor-permeable.

Acrylic-based products are available in a range of colors. Many suppliers promise their coatings perform as weather- and mold-resistant protective layers. White coatings typically are advertised as reflective. In some cases, it is implied coatings help realize energy savings by reducing the amount of heat absorbed by roof surfaces.

A few acrylic-based products are said to add thermal insulating value to roof surfaces. Marketing materials for these products claim their formulas contain technologically advanced components described as "ceramic microspheres" or "nanotechnology materials" characterized by extremely low thermal conductivities.

Some suppliers offer primers marketed for asphalt shingle surfaces for use with acrylic water-based coatings. These primers are composed primarily of petroleum

distillates or contain acrylic resins and hydrocarbon solvents.

I found few examples of nonacrylic-based coatings marketed for application over asphalt shingles. Those I did find contain SEBS or similar thermoplastic rubber binders and hydrocarbon solvents.

Cured coatings are characterized as sealants for joints between dissimilar materials or as waterproofing membranes for surfaces depending on application type. They are said to be clear in color, have rubber-like flexibility and accept paint finish. Products using this formulation appear to function as effective vapor retarders when applied as continuous film according to application instructions.

## Application

Because coatings for field application over asphalt shingles are marketed primarily to homeowners, ease of use is emphasized. Application instructions are designed for the average home-improvement enthusiast. Application by paint roller and brush commonly is recommended. Some products, typically primers, are intended for application with airless spray equipment.

Typical application instructions require shingles to be clean and dry before application begins though language for thermoplastic rubber-based coatings claims surface dampness will not interfere with adhesion. Dirt, debris and biological growth are to be removed. One of two options for cleaning typically is recommended: washing with water and detergent and then rinsing or pressure washing. A diluted bleach solution or proprietary cleaning agent may be recommended for eliminating algae, lichens and mildew.

NRCA and the Asphalt Roofing Manufacturers Association (ARMA) do not recommend pressure washing asphalt shingle roof systems because doing so may damage shingles.

Weather conditions appropriate for coating application typically are described



**Physical property information  
is not consistently provided  
for acrylic coatings**

as temperatures greater than 50 F and no precipitation for a period necessary to achieve moisture-resistant cure levels. Recommendations for coatings using hydrocarbon solvents generally are less restrictive. The initial cure time varies depending on product and/or number of coats and ranges from 12 to 72 hours. The upper temperature limit for application also varies depending on product or may not be provided. One supplier recommends application temperatures no higher than 95 F.

Asphalt shingles typically are subject to service conditions that make it impractical to fully abide by some of the recommendations described. The language used in the application instructions is consistent with the fact that water-borne acrylic coatings typically are sensitive to moisture and temperature until they cure.

### Evaluation tools

ASTM D6083, "Standard Specification for Liquid Applied Acrylic Coating Used in Roofing," is the standard material specification for water-dispersed acrylic coatings used as field-applied surfacing in roofing applications. No ASTM International standard material specifications are available for sealants or field-applied roof coatings using thermoplastic rubber binders.

Two standard test methods for measuring roof coatings' solar reflectance are available. ASTM C1549, "Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer," provides a procedure for using a portable measuring device with an integral light source suitable for laboratory and field readings from small-area samples. ASTM E1918, "Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field," is intended for use on low-slope roof surfaces, samples a large area for measurement, can be used for



readings from roughly textured surfaces and requires clear midday weather to perform measurements.

Roof coatings' thermal emittance may be measured according to ASTM E408, "Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques," or ASTM C1371, "Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers."

Thermal insulating properties are not associated with roof coatings; therefore, no standard test methods for evaluating thermal insulating performance of coatings in roofing applications are available. Consequently, it may not be practical to validate statements made about thermal insulating performance of field-applied roof coatings.

It may be difficult or impractical to objectively evaluate the physical properties and performance characteristics of coatings marketed for application over asphalt shingles. Compliance with ASTM D6083 was not indicated for any of the investigated products. Documentation for some of the products references standard test methods and standard material specifications; however, they are not standards used in roofing applications. Overall, the level of technical information presented is below par compared with that available for established low-slope roof system coatings.

Physical property information typically available includes density, solids content,

volatile organic compound content, wet and dry film thickness, coverage rate, application temperature range and cure time. Some suppliers publish test values for additional cured film properties; however, test method designations are not always provided.

### Concerns abound

The roofing industry is aware of a number of issues that could have negative consequences for field application of coatings over asphalt shingle roof systems. Anyone considering this type of application should be aware of the concerns so they can weigh them against the benefits claimed in coating product promotional materials.

### Manufacturer recommendations

There are two sources available to those interested in learning asphalt shingle manufacturers' recommendations.

ARMA Technical Bulletin No. 227, "Field Coating of Installed Asphalt Shingles," strongly advises caution when considering field applying any coating over installed asphalt shingles. The bulletin discusses problems reported after field coating asphalt shingles and advises homeowners to contact shingle manufacturers for approval before field coating asphalt shingles. To access the bulletin, visit ARMA's Web site at [www.asphaltroofing.org](http://www.asphaltroofing.org), click on All About Roofing, scroll to Publications and click on Technical Bulletins.

GAF-Elk Contractor Services published

Steep Slope Technical Point No. 151-09, "Field Coating of Installed GAF-Elk Asphalt Roofing Shingles," which does not recommend field application of coatings over asphalt shingles. The document addresses several questions likely to be asked by roofing consumers interested in field coating asphalt shingles. It is available from GAF-Elk's Web site at [www.gaf.com/Document-Library/DocList.aspx](http://www.gaf.com/Document-Library/DocList.aspx).

The ARMA and GAF-Elk documents caution that the claims made about benefits of field coating asphalt shingles have not been well-documented or evaluated.

Other asphalt shingle manufacturers either take ARMA's position, do not publish recommendations addressing field coating or take the position that field coating has negligible effects on asphalt shingles provided water-based latex paints are used. Hydrocarbon solvent-based coatings are not recommended for use on asphalt shingles because the solvent may soften the asphalt coating.

#### Warranties

Language in two manufacturers' shingle warranties specifically excludes coverage for damage to their products caused by coating or painting. It is reasonable to expect other manufacturers that do not include field coating-specific language in their product warranties would claim the exclusion applies to their products based on their warranties' more generally defined exclusions.

#### Drainage and permeance

Field coating asphalt shingles is at odds with one of the fundamental working principles of shingled roofing.

Shingled roof coverings shed water. In other words, shingles rely on gravity to do most of the work of keeping out water. Sometimes, water travels underneath shingles via capillary action, wind force or when large volumes drain down valleys. When this occurs, shingles allow water

to run down and to the outside surface of a roof.

When a coating is applied over roof coverings installed shingle-fashion, especially when it is intended to seal shingles at edges or form a continuous membrane, drainage paths for water trapped under the roof's outer surface may be cut off. Although wind-driven rain or water entry because of capillary action may be controlled or eliminated, the most common water entry locations where dissimilar materials meet at flashing elements can remain problematic. The potential for damage to underlayment and deck sheathing, as well as leaks from water infiltrating at flashing locations, is increased.

Additionally, depending on the coating type, field application over asphalt shingles may lower an asphalt shingle roof system's vapor permeability.

Asphalt shingle roof systems are vapor-permeable because joints between individual shingles allow vapor to pass through. Some coating formulations are effective vapor retarders. Applying a vapor-retardant coating to an asphalt shingle roof system's surface likely will compromise a roof assembly's self-drying characteristics.

Some roof assemblies may accommodate this with existing or additional ventilation. For other roof assemblies, the change in moisture transport resulting from coatings may be too much to maintain a non-condensing environment in attic or ventilation spaces.

#### Code restrictions

Local building codes may prohibit field applying coatings over asphalt shingle roof systems.

For example, 2007 Florida Building Code: Residential, Chapter 44—High-Velocity Hurricane Zones contains the following language applicable to reroofing residential buildings no more than three stories in height in Broward and Miami-Dade counties: "R4402.10.18.1 No sprayed polyurethane foam (PUF) and/or

elastomeric coating systems shall be applied over existing composition shingles."

Also, 2007 Florida Building Code: Building, Chapter 15—Roof Assemblies and Rooftop Structures contains the following similar language: "1521.18.1 No PUF and/or elastomeric coating systems shall be applied over existing composition shingles."

#### Fire-resistance ratings

A field-coated asphalt shingle roof system likely does not have an external fire-resistance rating. A coating is given a fire-resistance rating as a component of a specific roof assembly based on testing at a specific roof slope. Coatings marketed for application on asphalt shingle roof systems often do not possess fire-resistance ratings.

Roof coatings rated for fire resistance as part of low-slope bituminous roof systems are not suitable for application over asphalt shingle roof systems. Fire-resistance ratings for roof coatings and roof coating systems designed for application directly over bituminous membrane roof systems are limited to roof slopes less than the 2-in-12 (9-degree) minimum prescribed by building codes for asphalt shingle system applications. Additionally, some coatings manufacturers state their products are not appropriate for application over asphalt shingles.

#### Summing it up

No evidence currently is available to correlate marketing claims with actual performance of field-applied coatings over asphalt shingle roof systems, and such an application subjects a roof system and its owner to specific risks the owner should understand before making a decision to field coat an asphalt shingle roof system. A thorough cost-benefit analysis may prove that known concerns within the roofing industry outweigh the potential benefits. ☺ ● ✨

Maciek Rupar is an NRCA director of technical services.