The Only Magazine Dedicated to the Effects of Weather and Climate on Roofing

ROOFING ELEMENTS

www.roofingelementsmagazine.com

FALL 2022
Vol. 2, Issue 3

FRSA Show Highlights: Bustling For Business

EPA Looks At Reclassifying PVC As Hazardous Waste

Cool-Weather Installation Tips

+ Asphalt Shingles
+ SA Underlayment

CASH IN WITH GUTTER GUARDS

ORGANICS VS. ASPHALT

A LESSON IN SHINGLE DECAY

DRIPSTOP
Condensation control

Stop the Dripping from Condensation

From the Largest Ag Building to the Smallest Carport...

Keep Everything Under Your Roof Dry.

A Necessity for Any Metal Roofed Building That is Not Climate Controlled.

From livestock to equipment, you can trust DripStop to protect and keep the contents of your building dry.

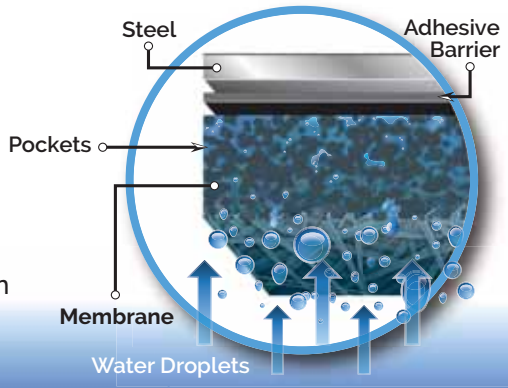
Areas of use:

- Post Frame/agricultural buildings
- Steel buildings
- Self-storage
- Workshops/unattached garages
- Carports, truck ports & RV storage
- Open-walled structures

Better Science Equals Drier Buildings

When condensation occurs, moisture gets stored in the specially designed pockets of the DripStop membrane.

- Helps fight corrosion
- Saves money
- Easy to clean
- Stops bird nesting
- Durable, rip & tear resistant
- Cuts down on time of construction



Ask for it from your preferred steel panel supplier

Visit our website at **www.dripstop.com** or call us at: **1-(937) 660-6646**

DRIPSTOP
Condensation Control

BY KAREN KNAPSTEIN
karen@shieldwallmedia.com

WELCOME TO FALL

Fall means falling leaves throughout much of the country. I'll bet many of you roofers notice the leaves that pile up on roofs late in the year, in which case, you'll find our cover story of interest. Jacob Prater, who is a natural science professor at the University of Wisconsin—Stevens Point, gives us a lesson in the science behind asphalt shingle decay. His lesson on asphalt begins on page 12.

You'll also find a pair of articles about cold-weather installations. The first is a guide from the Asphalt Roofing Manufacturing Association (ARMA). It's a technical guide of best practices for the installation of asphalt shingles during cold weather. Who better to address topics like this than the manufacturers themselves?

The second cold-weather installation article pertains to self-adhesive underlayment. We received guidance from several manufacturers; products vary, and so do the installation guidelines, so be sure to consult manufacturer guides and technical resources when executing your cold-weather roofing projects.

We're rounding out this issue with some post-show coverage of the Florida Roofing & Sheet Metal Expo. The Shield Wall Media Director of Sales, Missy Beyer, and I traveled to Daytona Beach to attend. It was my first visit to this Expo, and my first visit to Florida. The atmosphere was energizing ... although this Wisconsin gal is definitely NOT used to Florida's mid-summer heat and humidity. I had a wonderful time visiting with reps who I've met over the last three years. It's also exciting that I was able to meet so many representatives of companies with which I have no history.

As a result, you'll be "meeting" them, too ... within the pages of Roofing Elements Magazine over the course of the next year. We're wrapping up our editorial schedule for 2023, but if there are topics you'd like to see covered in our pages and on our website, be sure to send your suggestions my way!

CONTENTS

FEATURES

COMING NEXT ISSUE

- Snow & Ice Management
- Extreme Weather

GO TO PAGE 41 TO SUBSCRIBE TO MORE FREE MAGAZINES

ON THE COVER:

Organic debris holds moisture and feeds asphalt-degrading organisms. Photo by Jacob Prater.

YOUR PRIVACY IS IMPORTANT TO US

Unrelated third parties often attempt to sell mailing lists for what they say are our publications. You can be assured that WE DO NOT, HAVE NOT, AND WILL NOT EVER SELL OUR SUBSCRIBER LISTS. We will also NOT sell the attendee or exhibitor lists from our shows. We do provide attendee lists to the exhibitors free of charge and as a courtesy for their support, but we NEVER provide this or any other information to independent vendors.

Gary Reichert,
Publisher, Shield Wall Media

in this issue

ROOFING ELEMENTS MAGAZINE

Managing Editor
Karen Knapstein
karen@shieldwallmedia.com
715-513-6767

Editors
Linda Schmid, Anthony Brass

Circulation/Subscriptions
Barb Prill
barb@shieldwallmedia.com
920-471-4846

Digital Product and Data Engineer
For help with the online Business Directory contact:
Steve Duberstein
steve@shieldwallmedia.com

Publisher
Gary Reichert
gary@shieldwallmedia.com
715-252-6360

Director of Sales
Missy Beyer
missy@shieldwallmedia.com
920-216-3007

Executive/Advertising Assistant
Kathy Budsberg
kathy@shieldwallmedia.com

Sales Assistant
Kathy Welk
kathyw@shieldwallmedia.com

Graphic Designers
Tom Nelsen, Kevin Ulrich

Roofing Elements Magazine is published four times annually in Spring, Summer, Fall, Winter by Shield Wall Media LLC, 150 Depot St., Iola, WI 54945.

Roofing Elements Magazine assumes no responsibility for unsolicited materials sent to it. Publisher and advertisers are not liable for typographical errors that may appear in prices or descriptions in advertisements. Mailed free to roofing contractors and their suppliers throughout North America.

SHIELD WALL MEDIA LLC

From left, Dave Sokol, President Garland Industries, presents the 2022 Garland Sponsorship to Kenneth Lambert and his father, Garland employee Brian Lambert.

GARLAND PRESENTS 3RD ANNUAL SCHOLARSHIP

The Garland Company, a full-service roofing manufacturer and building envelope solution provider based in Cleveland, Ohio, announced that Kenneth Lambert is the recipient of the 2022 Garland Sponsorship. Lambert, son of 25-year Garland employee Brian Lambert, recently graduated from Strongsville High School in Strongsville, Ohio, and will begin his studies at Clemson University majoring in mechanical engineering.

The Garland Sponsorship was created in 2020 to honor the company's 125th Anniversary. The scholarship amount increases annually to coincide with the numbers of years Garland has been in business. This year's scholarship amount was $12,700 for Garland's 127 years of operation. Children of Garland employee-owners attending an accredited college or university are encouraged to apply. To ensure a fair selection, applications are submitted with names redacted, and evaluated by a committee from an outside third party.

Dave Sokol, President of Garland Industries, said, "As a 100% employee-owned company, we look for opportunities to invest in our people, and that includes their families. The dedication and drive we saw from all the young people who applied for this year's scholarship was inspiring. We have no doubt each of them will go on to have a tremendous impact on their communities. We congratulate Kenny on his achievement to stand out among such a superlative group."

NATIONWIDE COATINGS REFORMULATES ELASTOMERIC ROOF COATING

The past few years have seen unprecedented shortages in sourcing paints and coatings, which has made it difficult to find needed materials regardless of location. Increased material prices have given building owners pause on getting needed work done.

To help alleviate the lack of availability and increased prices, Nationwide Coatings has reformulated one of its flat-roof coatings. Permasil Plus™ is an elastomeric silicone acrylic hybrid roof coating is designed for flat roofs and has been reformulated with a proprietary blend of silicone resin and acrylic resin, resulting in exceptional water resistance.

The coating alternative comes with a 7-year warranty and is available in most fan deck colors as well as a bright white reflective coating. The acrylic coatings can be top coated in the future with a full recoat.

STINGER® CAP NAILS MEET REQUIREMENTS FOR FLORIDA PRODUCT APPROVAL

National Nail's STINGER®, its leading brand for roofing tools, cap fasteners and underlayment, announces that NailPac® collated cap nails for roofing underlayment meets requirements for Florida Product Approval (FL35349) under the Florida (DBPR) Department of Business & Professional Regulation and has previously met the Insurance Institute for Business & Home Safety's (IBHS®) FORTIFIED Roof™ program standards.

"NailPac has superior holding power and fastener coverage to secure roof underlayment, even in the worst conditions, for protection from the elements," said Zach Huth, National Sales Manager, STINGER. "With Florida Product Approval and FORTIFIED Roof compliance, NailPac is the best option for fastening underlayment."

Under the new standards, NailPac Electro-Galvanized cap nails help ensure roofing contractors and their customers that water will not enter the home, reducing damage during severe weather. Designed exclusively for use with STINGER's CN100B Cap Nailer, NailPac's caps seal out moisture and deliver superior holding power to secure underlayment in hurricane-force winds.

GAF Energy, a Standard Industries company and a provider of solar roofing, has announced it will build a new manufacturing facility in Georgetown, Texas.

GAF ENERGY ANNOUNCES NEW TIMBERLINE SOLAR™ MANUFACTURING FACILITY

GAF Energy, a Standard Industries company and a provider of solar roofing in North America, has announced it will build a new 450,000 square foot manufacturing facility in Georgetown, Texas, to meet growing demand for the Timberline Solar™ roof. The new facility, the company's second, will increase its capacity by 500% and bring total production of its solar shingle to 300 megawatts annually, making GAF Energy the largest producer of solar roofing in the world. Introduced earlier this year, Timberline Solar™ features the world's first nailable solar shingle and is the only roof system to directly integrate solar technology into traditional roofing processes and materials.

"The response from both consumers and roofers to our Timberline Solar roof has been tremendous and we're thrilled to be expanding capacity to meet that

WE'VE GOT YOU **COVERED!**

ProVia's Metal Roofing System is third-party tested and approved in Florida, meeting TAS 100, 110, and 125 requirements. Our stamped panel metal roofing system is certified for High Velocity Hurricane Zones in Miami-Dade and Broward counties and for Non-HVHZ regions in the entire state, withstanding wind speeds up to 180 mph.

ProVia's metal roof panels are constructed with 26-gauge steel—up to 30% more galvanized steel than competitive stamped metal roofing products. Our 4-Point Locking System includes a top lock, under and over locks on the sides, and our exclusive WaveLock™ ribbed feature on the bottom that increases the rigidity and strength of the panel.

ProVia®
THE PROFESSIONAL WAY

DOORS | WINDOWS | SIDING | STONE | ROOFING

SCAN ME

provia.com/metal-roofing

growing demand. Georgetown has a long track record as a clean energy leader, so it is the perfect home for us to build the future of solar," said Martin DeBono, President of GAF Energy. "We launched Timberline Solar because we believed that more consumers would choose solar if they had a more reliable, durable, and attractive option. The market has confirmed our belief—now we're turning that belief into reality and building the future of clean energy here in the U.S."

Once complete, the Georgetown manufacturing facility will result in hundreds of new U.S.-based, clean energy manufacturing jobs. The company's first manufacturing facility, in San Jose, California, was completed and began production last year. As a Standard Industries company and sister company to GAF, the largest roofing and waterproofing company in North America, GAF Energy can draw on extensive manufacturing and R&D expertise, with access to the largest network of roofing partners in the industry.

ALL WEATHER INSULATED PANELS AND SIKA ANNOUNCE PARTNERSHIP

All Weather Insulated Panels (AWIP) has announced a partnership with Sika Corporation–Roofing, to expand Sika's current roofing system capabilities. The joint effort will provide an enhanced membrane offering to the OneDek® Insulated Roof Deck, to include AWIP's OneDek® insulated roof panel and Sika's Sarnafil PVC roof membrane.

OneDek® Insulated Roof Deck System is an alternative to traditional multi-layer, low slope roofing systems. It features just two components to complete the roof: an insulated roof deck panel and membrane. Requiring fewer steps to install saves construction time and provides exceptional energy efficiency for low-slope roofing projects. Incorporating Sika membranes to the OneDek® system allows for additional benefits including enhanced performance, increased sustainability impact and a reduction in lead times when installing the total roof system.

"We are thrilled to expand the availability of OneDek to a broader market through this partnership with Sika Sarnafil," said Greg Lusty, VP of Sales at AWIP. "With our third manufacturing facility now operational, we are poised to support the expected growth of this truly revolutionary system for low slope roofing."

AWIP's OneDek insulated roof panel and Sika's Sarnafil PVC roof membrane are all that are needed to complete a low-slope roof.

The complete OneDek® system utilizes an insulated roof deck panel and the Sika Sarnafil PVC membrane for low slope roofs. An RD1 or RD1-M flat insulated roof deck panel creates a single component to encompass the steel deck, insulation, air and vapor barrier and substrate necessary for field application of the membrane.

"This is an exciting new system offering for us," said Bill Bellico, VP of Marketing at Sika Sarnafil. "Forming a partnership with a high-quality company like AWIP to offer the marketplace a new option for installing both your structural deck and roof system with less system components is a great new development for us."

The enhanced offering will provide a full system warranty that covers the insulated roof deck panel as well as 60, 72 or 80 mil Sika Sarnafil membrane.

FIRESTONE REBRANDING AS PART OF HOLCIM

Firestone Building Products has announced it is adopting the Holcim name and brand identity, becoming the Holcim Building Envelope division of its Solutions & Products Business Unit. Firestone's iconic brand, an industry leader in roofing, wall and lining systems, becomes Elevate™, symbolizing Holcim's continued commitment to deliver superior quality and innovation with advanced building solutions. Holcim's range of building envelope solutions includes wall, lining and waterproofing systems for commercial and residential applications. It unites some of the most trusted and high-quality brands in its sector including Gaco, GenFlex and Malarkey Roofing Products, as well as Elevate, the new brand name for Firestone roofing systems.

"Over the past 40 years, Firestone has built a reputation as a leader and innovator in the commercial roofing sector. And now we are making it official; we are uniting Firestone Building Products' iconic legacy with Holcim's future focus on accelerating green growth," said Jamie Gentoso, global head, Solutions & Products for Holcim. As we open this new chapter of growth with star brands from Elevate to Malarkey, I am committed to contributing to our customers' success with a rigorous focus on advanced solutions, superior quality and innovation."

Firestone, a provider of roofing, wall and lining systems, is becoming Elevate. Building on Firestone's brand and legacy, Elevate represents Holcim's commitment to deliver superior quality and innovation with advanced building solutions.

Customers will see Elevate evolve as the brand name on products like RubberGard™ EPDM and UltraPly™ TPO, all of which will remain in the market.

THE ONLY GLOBAL EVENT DEVOTED EXCLUSIVELY TO
THE USE OF METAL IN DESIGN AND CONSTRUCTION

METALCON

INDY '22

OCTOBER 12-14

INDIANA CONVENTION CENTER

SEE YOU IN INDY!

WWW.METALCON.COM

THE VINYL INSTITUTE LAUNCHES UPDATED PVC/VINYL RECYCLING DIRECTORY

The Vinyl Institute (VI), released a new version of its PVC/Vinyl Recycling Directory [https://www.vinylinfo.org/recycling-directory/] that includes more than 100 recyclers across North America that accept PVC/vinyl materials. This updated version of the PVC/Vinyl Recycling directory includes the name, location, contact information and the types of PVC materials recyclers will accept.

"PVC materials can and are being recycled in North America. Our goal is to connect recyclers with general contractors, organizations, and individuals that have PVC materials they want to recycle," said Ned Monroe, president and CEO of the Vinyl Institute. "We want to keep as much PVC as possible from going to landfills and connecting recyclers with groups that have PVC items to be recycled is a big step in helping increase the amount recycled pre- and post-consumer PVC materials."

Visitors to the recycling directory homepage will be asked to select from the list of vinyl/PVC material(s) that can be recycled, and to identify the state(s) where the items are located. The directory will identify any recyclers in the states specified that accept the items selected. In some cases, there may be more than one recycling organization, or there may not be one in the state(s) selected. The PVC/Vinyl Recycling directory includes recyclers that take rigid and or flexible PVC materials.

In the U.S. and Canada, more than 1.1 billion pounds of pre- and post-consumer PVC/vinyl materials are recycled annually. That number includes 142 million pounds of post-consumer vinyl materials (mostly building materials). Members of the Vinyl Sustainability Council, an industry collaboration platform founded in partnership with the VI, have set a goal to increase the amount of recycled post-consumer vinyl material by 16 million pounds by 2025. Efforts like the PVC/Vinyl Recycling Directory and recycling pilot programs for vinyl roofing membranes and vinyl siding are helping the industry achieve this goal.

Asphalt Roofing Product Shipments

Shipments (squares)	Q2 2022	Q2 2021	% Change	YTD 2022	YTD 2021	% Change
Shingles – U.S. (including individual shingles)	45,521,069	46,866,575	-2.9%	88,449,004	90,111,959	-1.8%
BUR base, ply, and mineral cap sheets – U.S. (not including saturated felts)	2,019,867	1,936,125	4.3%	3,837,525	3,606,924	6.4%
Modified Bitumen – U.S.	11,431,906	11,111,274	2.9%	21,290,117	20,440,393	4.2%
Shingles – Canada (including Individual shingles)	3,906,364	3,821,648	2.2%	7,455,919	7,966,701	-6.4%

ARMA RELEASES 2022 Q2 REPORT ON ASPHALT ROOFING PRODUCT SHIPMENTS

The Asphalt Roofing Manufacturers Association (ARMA) has released its Quarterly Product Shipment Report for the second quarter of 2022. The report covers asphalt roofing product shipments in the United States and Canada in the second quarter, as well as year-to-date shipment information and a comparison with the prior year's data.

"We're aware that asphalt roofing data is relevant to several industries; that is why ARMA has decided to make this information accessible to the public," said ARMA's Executive Vice President Reed Hitchcock. "We see this report and future reports as a way of providing meaningful industry shipment information."

Roofing product shipment data is collected from participating manufacturers by an independent third party, Association Research Inc., and aggregated to create this report. Companies that are not members of ARMA may examine the free quarterly summaries, and those ineligible for ARMA membership can subscribe to the full, detailed report on the ARMA website.

The Asphalt Roofing Manufacturers Association (ARMA) is a trade association representing North America's asphalt roofing manufacturing companies and their raw material suppliers. The association includes the majority of North American manufacturers of asphalt shingles and asphalt low slope roof membrane systems. Committed to advances in the asphalt roofing industry, ARMA is proud of the role it plays in promoting asphalt roofing to those in the building industry and to the public.

GAF EXPANDS COMMERCIAL ROOFING OPERATIONS, ANNOUNCES FIRST LARGE-SCALE ASPHALT SHINGLE RECYCLING PLANT

GAF, a Standard Industries company and North America's largest roofing and waterproofing manufacturer, has announced a commitment to build the company's fifth polyisocyanurate (polyiso) insulation manufacturing plant in Peru, Illinois.

GAF has signed an agreement to purchase more than 100 acres of land in Bureau County, Illinois for the future home of a 450,000 sq. ft. plant that will manufacture the company's EnergyGuard™ line of products. Construction is expected to break ground in the third quarter of this year with production beginning on the site in 2024. GAF expects to bring more than 70 advanced manufacturing and engineering jobs to the Peru community through this new plant.

Polyiso is a versatile, high-performance insulation solution commonly used as continuous insulation for roofs

and walls. It is often used in sustainable or green building applications. All polyiso roofing insulation manufactured by GAF has received GREENGUARD Gold certification, which means it has been tested against standards and proven to have low emissions of volatile organic compounds (VOCs).

This new plant will join the company's four existing polyiso operations in Cedar City, Utah; Gainesville, Texas; Statesboro, Georgia; and New Columbia, Pennsylvania.

Additionally, GAF has announced plans for its initial commercial-scale asphalt shingle recycling operation to reclaim post-consumer shingle waste and support production of the first roofing shingles manufactured with recycled asphalt.

The operation includes a new asphalt shingle recycling center located in Corsicana, Texas, designed to take end-of-life roofing shingles, reclaim 90 percent of the waste material collected and create high-quality recycled asphalt briquettes that can be transported and used in the manufacture of new products. It also includes an expansion to GAF's Ennis, Texas shingle plant, allowing it to utilize the briquettes to manufacture shingles containing recycled material that meet the same standards for quality and performance as GAF's other Timberline products.

The company expects both components to be fully operational by the end of 2023. It plans to scale this recycling capability with the ultimate goal of incorporating recycled asphalt content across all GAF shingle products and diverting at least 1 million tons of asphalt shingles annually from landfills by 2030. Once operations are up and running, the Corsicana facility will be able to divert 300,000 tons of shingle waste from landfills a year, supplying the Ennis plant, and other shingle facilities, with enough recycled asphalt briquettes to produce shingles containing recycled content for more than 660,000 homes each year.

Today, about 75 percent of roofs in the U.S. are protected with asphalt shingles, and only about 10 percent of those roofs are reused or recycled, with the rest (13 million tons) ending up in landfills. Through GAF's process, the shingles from just one roof can produce enough recycled material to cover 12 new roofs.

Algae, moss, and lichen are the first organisms to show up on an asphalt shingle roof. PHOTOS BY JACOB PRATER

ORGANICS VS. ASPHALT

IMPACT OF ALGAE, MOSS, AND LICHEN ON ASPHALT SHINGLE ROOFS

By Jacob Prater

What do asphalt shingle roofs and soil formation on bare rock have in common? Well, the same process that slowly breaks down rock by dissolving minerals and opening cracks to form soil is the same process that can slowly deteriorate an asphalt shingle roof.

Every ecosystem (yup, a roof is an ecosystem) has a process of succession where plants start to take hold and then change their environment so that another set of plants can take over and so on until, in many cases, you get a forest. (Yes, I have seen a forest on a roof.) The trick with a roof though is that you want to stop this process and prevent it from occurring. Basically, you want to make that roof an inhospitable environment for anything that grows.

Algae, moss, and lichen are the first organisms to show up on bare rock and they are also the first to show up on an asphalt shingle roof. Each of these organisms is designed to survive and thrive and they will if you let them.

While they are not all plants (lichen is a fungus with algae living inside it), they each need moisture and nutrients in addition to sunlight to survive. And like any living thing, they will do their best to survive, each releasing acid to break down whatever it is they are growing on — be it rock or asphalt shingles.

The acids released by these organisms are designed to break down and dissolve rocks and minerals, albeit slowly, so they are perfectly capable of deteriorating an asphalt shingle roof and shortening its effective lifespan. Essentially, these organisms, by the chemicals they release, can break apart or break loose granules, degrade the asphalt, and even the substrate of the shingles over time.

The moss will also grow root-like structures and the lichen a similar attachment structure. These roots and attachment structures can pry loose granules and even penetrate to the sheeting in some cases. If you have ever seen a tree root that split a rock or cracked a sidewalk, then you

understand this process even if it is in miniature on the surface of a roof. Since these organisms can do damage, a little bit of understanding of the organisms can go a long way into prevention.

First, these organisms need water, but they are tough and can dry out quite a bit between waterings and still survive. (Remember, they were designed to eke out an existence on bare rock.) Since moisture is generally shed off of a roof pretty well, you are most likely to find growth of these organisms on the east- and north-facing portions of roofs (in the northern hemisphere), so special care and maintenance may be more important for these roof sections.

Realistically you are not going to be able to do much on the water-limiting side of things other than to reduce shading and, as a result, speed up evaporation. Also, keep the roof free of debris such as leaves, needles, twigs, and branches. The debris, of course, provides something else to grow on and potentially nutrients, but more importantly it holds valuable moisture for these organisms. If these little survivors get a spot going where they can live, they will put roots and similar structures into any crack or crevice no matter how small and then expand it. (Remember, though slow, they can break rock.) In addition to working their way into a shingle, moss can begin to lift shingles slightly and create a gap where other things may get in and moisture may be held. Left like this water may find its way to the roof sheathing, resulting in rot. So, the first line of prevention is to trim back those trees and remove debris from the roof. Of course, by trimming back trees you also avoid a more rapid type of damage — namely that caused by branches or trees falling on the roof.

The next step to preventing asphalt shingle roof deterioration from algae, moss, and lichens is to make the environment for them inhospitable chemically. This involves a two-fold approach:

1) Don't allow any nutrients to sit on the roof (leaves, needles, twigs, and

Although algae, moss, and lichen are slow-growing, they can break rock.
PHOTOS BY JACOB PRATER

The hazards of wood and roofs extend beyond damage from falling trees and branches. Debris such as leaves and branches provide organisms with moisture, an added place to grow, and possibly even nutrients.

branches), and

2) Introduce chemicals that these organisms can't tolerate. While number 1 is obvious and simple, the second strategy is more complex or expensive. To make things easier many manufacturers have produced asphalt shingle products that are algae or moss resistant, but there are other strategies as well, such as zinc strips.

Simple observation shows the savvy owner or roofer that algae on roofs doesn't grow where flashing drains onto the roof. Galvanized flashing (it's likely the zinc) shows a pattern of algae suppression on a roof that otherwise shows stains. A potential solution, then, is to apply strips of zinc (lead and copper work as well) coated material on the roof to suppress this algal growth. There are commercial products available, but cut flashing strips can work as well. These can be placed under a course of shingles or placed as a continuous strip along a ridge vent.

Even when the best practices are followed you can have a north or east facing roof section that ends up impacted with algae, moss, lichen, or all three. In this case or if prevention was not done for whatever reason and you are faced with algae, moss, and lichen on an asphalt shingle roof there are products available to kill these organisms and avoid further roof deterioration. Simple removal with a broom, blower, or brush (be gentle and this is easiest to do after a rain or if you wet down the roof with a hose) can help, but it won't kill the organisms and they will likely return within a year or less. You really need to chemically kill these little organisms and for that there are various treatments available at most construction and hardware retailers. When asked about removing moss, Dan Heinen (50+ years of roofing experience) said, "People have and do use bleach-based mixtures to kill algae, moss, and lichen and while effective, routine use may degrade shingles as well." Even with the best products used to kill algae, moss, or lichen they may still return within five years or so, thus a re-treatment may be necessary. If prevention isn't part of regular maintenance then these organisms will return more rapidly. If putting on a new asphalt shingle roof in a shady place, it is highly recommended to use shingle products resistant to growth and/or zinc strips.

Organisms need moisture to grow. Note there is no algae growing below the pipe flashing on this roof.

Routine maintenance with a product that can kill the growth of algae, moss, and lichen is likely a good plan for the owner of the building as well. The old adage applies: "An ounce of prevention is worth a pound of cure." ●

SEPTEMBER

Sep. 24-26
Western Roofing Expo (WSRCA), Paris, Las Vegas, Nevada; westernroofingexpo.com

Sep. 27-29
RCAT / MRCA Roofing Conference, Fort Worth Convention Center, Fort Worth, Texas; www.roofingcontractors-texas.com

OCTOBER

Oct. 12-14
METALCON, Indiana Convention Center, Indianapolis, Indiana; www.metalcon.com

Oct. 26-27
Construction Rollforming Show, Ernest N. Morial Convention Center, New Orleans, Louisiana; www.constructionrollformingshow.com

NOVEMBER

Nov. 6-8
RoofCON Roofing & Solar Conference, Orange County Convention Center, Orlando, Florida; roofcon.com

Nov. 8-10
FABTECH, Georgia World Congress Center, Atlanta; www.fabtechexpo.com

2023

JANUARY

Jan. 18-19
Garage, Shed & Carport Builder Show, Greenville Convention Center, Greenville, South Carolina. garageshed-carportbuilder.com/show-registration/

Jan. 23-25
MCA Winter Meeting, Hyatt Regency in Clearwater Beach Resort & Spa, Clearwater, Florida; www.metalconstruction.org

FEBRUARY

Feb. 12-15
SprayFoam 2023 Convention & Expo, hosted by the Spray Polyurethane Foam Alliance (SPFA), Ocean Center, Daytona Beach, Florida; https://www.sprayfoam.org/sprayfoam23

MARCH

March 7-9
International Roofing Expo, Kay Bailey Hutchison Convention Center, Dallas, Texas; www.theroofingexpo.com

GUTTER PROTECTION

ADD-ON SERVICE CAN GROW YOUR MARGINS

By Roofing Elements Staff

Are you a roofer looking to add a high-margin product to your offering of add-ons? Jim Ealer, Midwest Enterprises, maker of the E-Z-Gutter Guards brand (www.e-zgutter.com), says gutter protection is the most profitable install product in the building envelope, and one often missed by roofers.

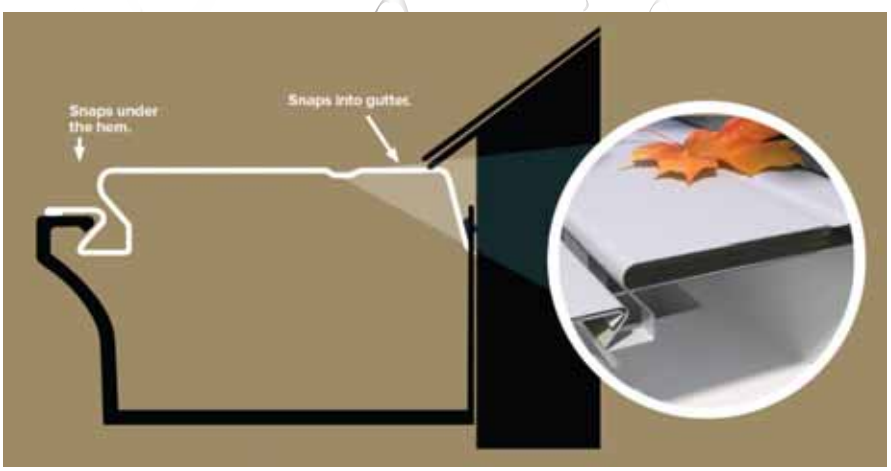
"A lot of roofers are missing out when they don't add gutter protection onto their estimates," he said. "Roofing and gutters are getting to be commodities, but gutter protection is still a high-margin item."

The field of gutter protection has come a long way since it gained attention back in the 1980s. Ealer credits a product called Gutter Helmet for changing the market with its high-profile TV ads. Suddenly, consumers understood the benefits of covering their gutters to avoid the tiresome task of cleaning them of debris.

Ealer's father, Jim Sr., was already aware of the importance of gutter protection having been a gutter installer. In fact, he developed his own brand of gutter screen.

"We were the largest gutter installer in the St. Louis region," recalls Ealer. "We were doing 75% of all housing starts. We put a lot of gutters up in the 1980s."

Ealer was 14 years old when his father started the business and, by the time it was transitioned into manufacturing gutter guards, he spent 20 years himself as an installer. "I was crew chief, so with my crews I was responsible for over a million-and-a-half feet of gutter. In '83, my father designed Easy Lock, the very first powder-coated screen."



This style of gutter protection developed by Midwest Enterprises offers a snap-in system that makes for easier installation without disturbing the roof. Pictured is the E-Z-HydroClean. Graphic from Midwest Enterprises

> When you are selling a roof to a customer, you are typically the first person that customer approaches about roofing-related issues.

In 1999, the Ealer family moved out of gutter installation and went full time into manufacturing a growing list of gutter protection products. They installed their first powder-coat line in 2000, and added a second powder-coat line in 2010. Today, they manufacture and sell more than 20 varieties of gutter protection.

GUTTER PROTECTION

As a roofer, you may not want to add gutter installation to your repertoire of services, but might instead contract that work out to an installer who has the necessary tools and machines. But when you are selling a roof to a customer, you are typically the first person that customer approaches about roofing-related issues. That gives you prime opportunity to educate them on the need for gutters and gutter protection. It behooves you to have some basic knowledge about why it is important and what types of each are needed based on regional conditions.

Gutter Size: First is understanding gutter size (measured from the outside of the fascia board to the outside of the gutter). For residential use, 5" gutters are standard for traditional shingle applications. For most metal roofs, a 6" gutter is considered standard.

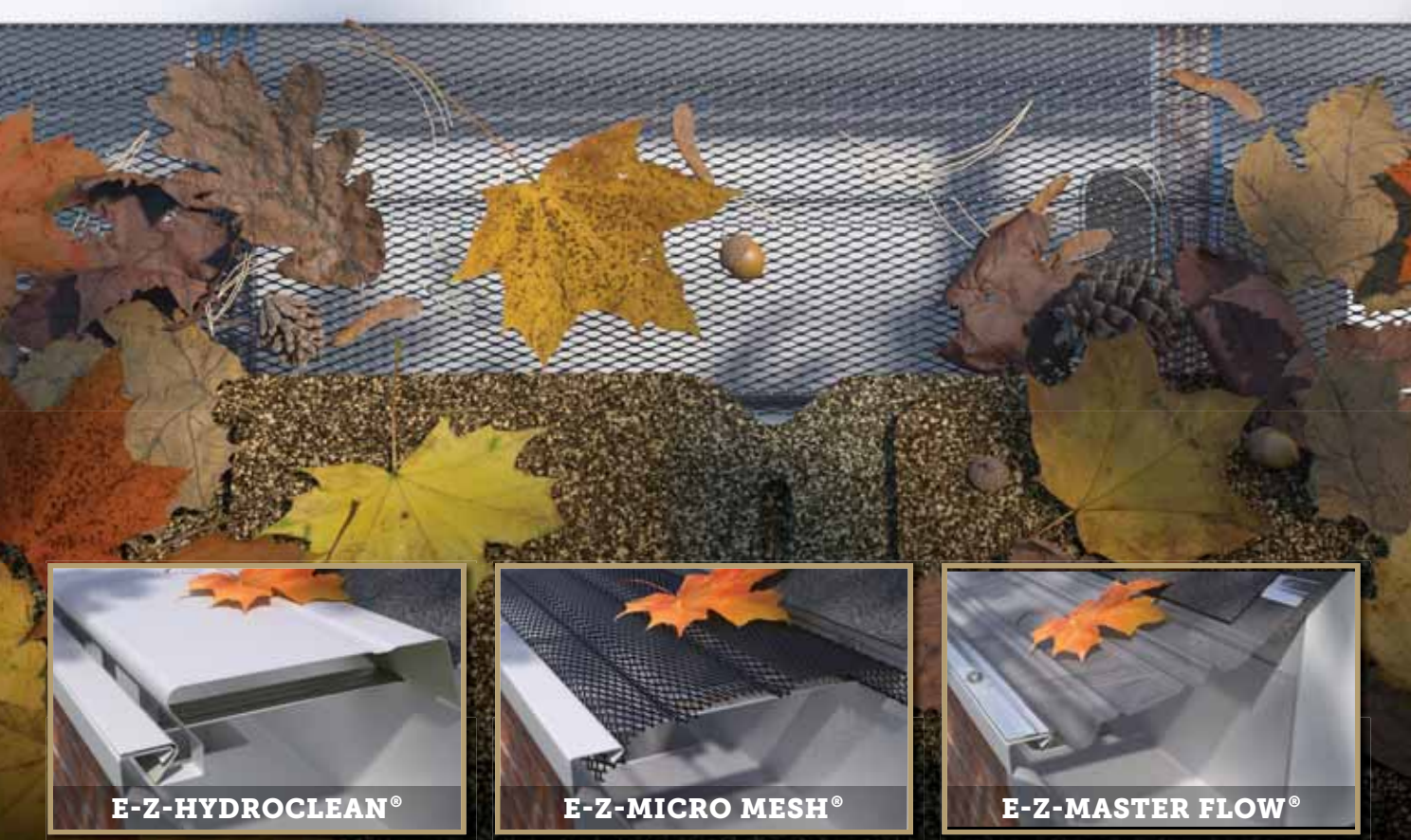
"No matter what part of the country you are in, you need to go with the 6" gutters," Ealer noted. "Heavier gutters, [and] thicker, stronger gutters hold a bigger volume of water."

A special note: Tile and metal tile roofs require at least a 6" or 7" gutter. With tile roofs, Ealer noted: "Water will roll off the top and in between the tile ridges, so instead of spreading the water all the way across the roof, it's concentrating it, nar-

GUTTER GUARD PROTECTION
E-Z
SINCE 1983

30+ Years. 20 Gutter Guards.
1000 Different Environments.

We Have a Gutter Guard for That.



E-Z-HYDROCLEAN®

E-Z-MICRO MESH®

E-Z-MASTER FLOW®

636-629-6484 | 800-748-7736 | email: sales@E-ZGutter.com | www.E-ZGutter.com

rowing it down to little troughs. You're effectively cutting the size of your roof in half or more, so it's very important to use wider gutters."

The most trouble-free option for the building owner is a metal seamless gutter, made as one continuous gutter on a job site gutter machine.

Proper Gutter Placement: One point that is often overlooked by metal roofers who attempt gutter installation themselves, or who are assessing a problem area for a re-cover estimate, is proper placement of the gutters. On metal roofs, the gutter needs to be installed below the roofline. This can be particularly important in certain regions where heavy rain or snow can damage gutters.

"You want your gutter a little lower than if you were installing [it] on a regular shingle roof," Ealer said. In areas with heavy snow, the reason is more obvious.

"If the ice and snow comes off the metal roof, it's going to be frozen straight, so it is going to come off the roof at the same plane as your roof. If the gutter is installed above that line, then the snow is gong to catch on the front of the gutter. If you install below the roof plane, you stand a better chance of the snow or ice missing the gutter and gutter cover."

A word on stone-coated metal: It's better than standing seam at slowing down water and keeping ice at bay, but should also have gutters installed below the roofline.

Hangers and Spacing: Strong, well-placed gutter hangers will aid in controlling gutter damage.

"Any good gutter installer is going to use heavy duty hangers and space them more often," Ealer said. "You want to make sure you use really strong hangers; standard spacing is 24"… On a metal roof, you want to make sure you have them at a maximum of 24" apart, and better yet 20". And that's true whether you're working in the northern climates with snow, or in the southern climates with rain. The water comes off the metal roof so fast, it's going to fill up the gutters faster, so there's more weight involved."

Also, make sure the hidden hangers are screwed very securely.

Snow Retention: In snow and ice areas, snow retention for metal roofs is essential.

"The thing you have to remember, whether it's snow or rain, the metal roofing is so much slicker and faster than standard shingles so it's really necessary in cold areas to use snow brakes. That is one of the most important things to do," he said.

Gutter Cover Options: On metal roofs (after the snow retention is installed and the gutters are placed lower than the roofline with ample strong hangers spaced correctly), the icing on the cake is the placement of gutter covers. Regional conditions again play a role in the best selection. Covers, in fact, don't just help with keeping debris out of gutters and eliminating routine cleaning, they also help control rain and snow.

A solid gutter cover is best in heavy snow areas. "If it's a solid aluminum gutter cover on top of the gutter, that will help shed the snow and ice off the gutters," Ealer explained.

"In the South, where heavy rains are more prevalent, the best choice is a screen. Those accept more water (the big downpours they have), but they're not really good for holding up snow," he added.

A general rule of thumb: Use gutter covers where it snows, and screens where it rains.

Just a few years ago, Midwest introduced the first gutter cover that is particularly good for metal roofs.

"We came out with E-Z-HydroClean and E-Z-HydroClean High Capacity," he said. "It's the only solid gutter cover in the country that just snaps into the gutter; you don't need to fasten it with any screws to the gutter or the roof. It's very low-profile."

The High Capacity version is considered the company's "Cadillac" of gutter protection styles.

De-Icing Systems: If you are in an area where freezing and thawing occurs throughout the winter, the building owner may wish to invest in a roof de-icing, or radiant heat, system to keep damaging icicles at bay, particularly on the north-facing side of the roof where icing problems are typically more prevalent.

"A lot of times it depends on the freeze and thaw cycle, and which directions your gutters are pointing, as to whether the roof is more susceptible to icicles," Ealer noted. De-icing systems are not common on most roofs, and Ealer is not familiar

The E-Z-HydroClean High Capacity gutter guard from Midwest Enterprises. The holes admit some of the water into the gutter, slowing the flow, while the rest flows around the nose into the gutter.

with the options, but realizes that it can be an effective solution for some problem roofs and can avoid gutter and cover damage.

The Trouble With Trees: What type of trees are near the roof can make a huge difference in the type of gutter protection you should select.

"If you just have oak trees, then a standard type of screen is fine," Ealer said. "But if you have trees with smaller leaves, like a poplar, you need a screen with smaller holes."

The most difficult of all, however, are evergreen trees. "That's the most difficult debris to combat," he said. "A large volume of pine needles comes off a pine tree and fills up your gutters in the matter of no time. That takes a specialized gutter protection."

GIVE 'EM WHAT THEY WANT

In his own arsenal of gutter protection, Ealer said his company has developed just about every type of gutter cover for every situation, but admits that part of its inventory is to appease installers who are devoted to a particular style.

"Once a gutter installer has success with a product, it's really hard to get them to change. They're very loyal to that type of product," Ealer said. "They may change brands but they won't change types. So the reason we have so many different types of gutter protection is so the distributor can combine sales with all the different gutter protection they offer. Even though they might sell most of one particular screen or cover, they can also take care of the installer who might want an oddball type. There's a competitor to all those types of screens, we're just the only one that can provide them all."

If you decide to offer gutter protection as an add-on, Ealer reminds you that knowledge is power, and knowing what can work best in your own area is half of the battle of upselling to your customer.

BY ROOFING ELEMENTS STAFF

SELF-ADHESIVE UNDERLAYMENT

PRACTICAL TIPS FOR COOL-WEATHER INSTALLATION

Underlayment is installed over roof decking to provide protection against water intrusion. It's a critical component for waterproofing a roof. Self-adhered underlayments offer secondary water protection for the entire roof in the event of a roof breach. Once installed, the underlayment protects the structure before, during, and after the installation of the roofing system.

Warmer temperatures enhance the adhesion properties of the membrane, reducing the chance of encountering problems during installation. But since it can't always be installed in optimal weather conditions, here are some practical tips and tricks for assuring self-adhesive underlayments adhere as they were designed.

In general, most self-adhering roofing underlayments state a minimum installation temperature range. This includes both the ambient air temperature and the surface temperature of the roof deck substrate. In cooler weather, when the surface temperature drops below 50°F, there is a tendency for condensation to form on the surface. The deck surface must always be free of dirt, debris, and moisture (including condensation and frost) for the membrane to properly adhere to the substrate. These things will impair the adhesive properties of the self-adhering membrane.

Sharkskin Ultra SA® installed over DensDeck. Fort Wainwright, Fairbanks, Alaska. This underlayment sticks in the cold – down to 10˚F – without primer.
PHOTO COURTESY OF KIRSCH BUILDING PRODUCTS/SHARKSKIN.

When the ambient air temperature is below 40°F, some products require that certain precautions be taken to assure proper adhesion. Materials should be stored in a heated area before installation, so membrane rolls and adhesives come to a minimum temperature as specified by the manufacturer prior to application.

Materials should be brought out as they are installed to keep them at the best workable temperature. (Use caution when working with the adhesive side of

ROOFING ELEMENTS WISHES TO THANK THESE SUPPLIERS AND MANUFACTURERS FOR LENDING THEIR EXPERTISE FOR THE EDUCATION OF OUR READERS:

Firestone Building Products	www.firestonebpco.com/us-en/
GAF	www.gaf.com
Garland	www.garlandco.com
MFM Building Products	www.mfmbp.com
Kirsch Building Products	www.sharkskinroof.com

the underlayment so as to not let it stick to itself or other surfaces prior to installation.) Depending on the underlayment, weathered surfaces may require the use of a primer prior to underlayment installation to provide a clean and smooth surface. Contact the underlayment manufacturer for their list of approved primers.

Depending on the type of roof system and the roof pitch, mechanical fastening may be necessary. (If the roof is steep enough, a batten system may be required.) Once the barrier is in place, immediately back nail every 18" in the top selvage edge to prevent slippage before the sheet adheres to the deck. Most self-adhered underlayments self-seal around fasteners to maintain a waterproof barrier; however, when back nailing, be sure that all nails are covered by the next overlapping sheet. It's recommended that horizontal overlaps be a minimum of 3", while vertical (end laps) should be a minimum of 6".

If using caulks and sealants, be sure to use materials that are compatible with the adhesive on the underlayment. Plasticizers may react with the adhesive on the underlayment, which may cause the mastic to liquefy. Installers are responsible for making sure the underlayment is compatible with products with which it will come in contact.

PRESSURE IS A GOOD THING

Applying sufficient pressure is critical in establishing solid adherence to the roofing substrate. To achieve and maintain a secure bond, broom the entire surface of the underlayment from center to edge and roll with a large, heavy push or hand roller; pay special attention to all overlap areas. If necessary, a hot air gun can be used at the laps to promote adhesion.

IMPROPER INSTALLATION

Some of the problems that can result from improper installation include sheet movement and falls. If the underlayment isn't firmly adhered to the deck, it can move underfoot, causing a worker to slip and fall.

If the laps aren't sealed, they can allow water and dirt to enter. If dirt or other debris enters a lap area, it may never seal. It's always critical to start at the low point

on the roof and install in a shingling manner, so overlaps run with the flow of water to avoid any backwater laps.

If the membrane is too cold during installation, it may wrinkle, which can be visible through the shingles when the roof warms up. In severe cases, the wrinkles can even compromise the water-tightness of the laps and can result in leaks.

CONCLUSION

When installed correctly, self-adhesive underlayments can provide the roofing contractor with peace-of-mind and greatly reduce the number of call-backs to fix a leaking roof. Detailed product information is readily available from manufactures in the form of technical data sheets, installation instructions, installation videos and other sources.

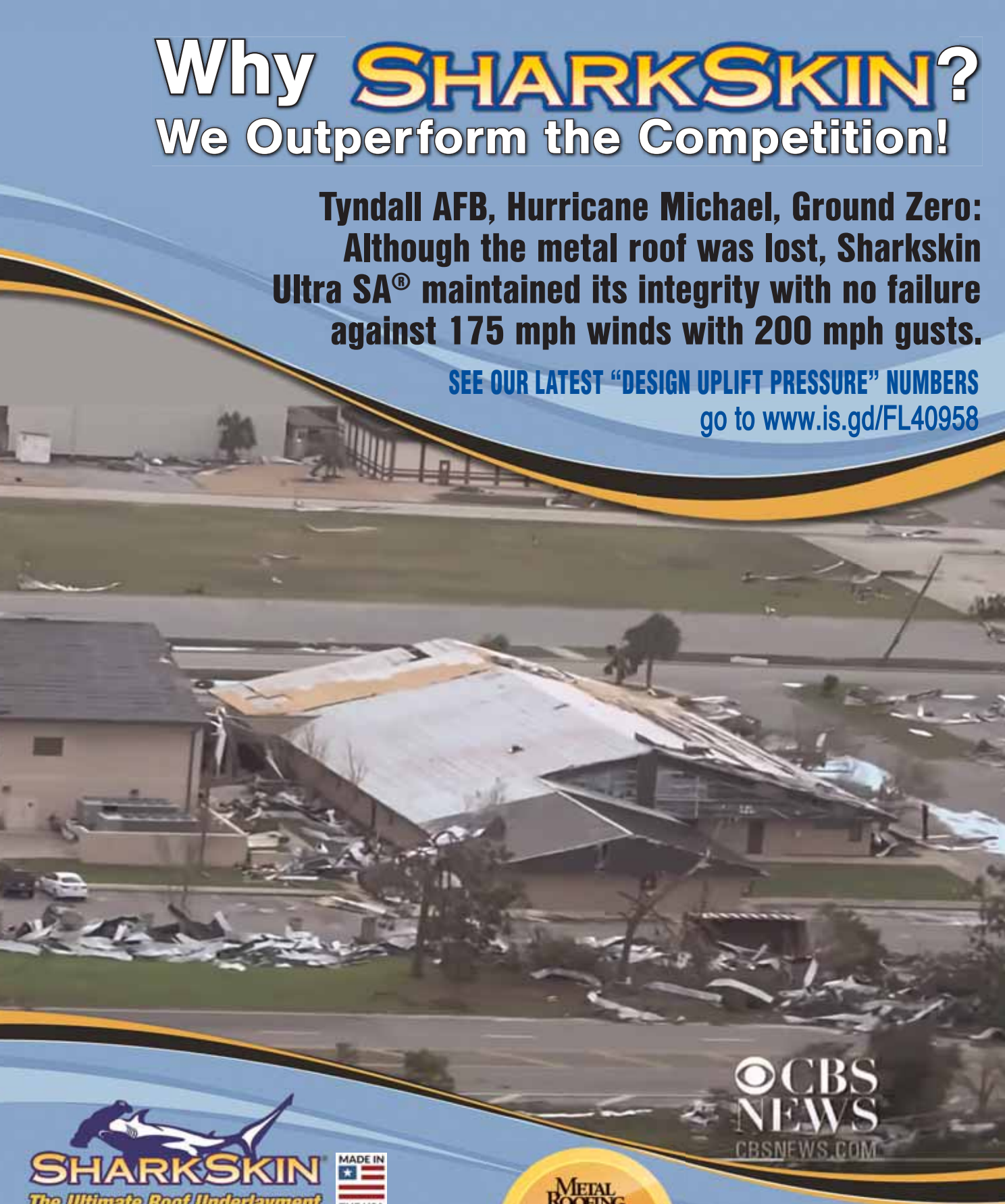
A split-release liner film backing makes application of self-adhesive membranes much easier.
PHOTO COURTESY OF MFM BUILDING PRODUCTS.

Why SHARKSKIN?

We Outperform the Competition!

Tyndall AFB, Hurricane Michael, Ground Zero: Although the metal roof was lost, Sharkskin Ultra SA® maintained its integrity with no failure against 175 mph winds with 200 mph gusts.

SEE OUR LATEST "DESIGN UPLIFT PRESSURE" NUMBERS
go to www.is.gd/FL40958



SHARKSKIN
The Ultimate Roof Underlayment
MADE IN THE USA

877.742.7507
www.sharkskinroof.com

Metal Roofing Magazine
METAL OF HONOR 2022
WINNER

By Asphalt Roofing Manufacturers Association (ARMA)

EXCELLENCE IN ASPHALT

FREQUENTLY ASKED QUESTIONS ABOUT THE PRESTIGIOUS ARMA AWARDS PROGRAM

The roofing sector has talented, dedicated, and ambitious professionals who deliver outstanding contributions to the industry. So why not celebrate their remarkable project achievements?

The Asphalt Roofing Manufacturers Association (ARMA) recognizes roofing professionals through a prestigious awards program focused on the exemplary use of asphaltic roofing materials.

The ARMA Excellence in Asphalt Roofing Awards Program seeks to identify the top low- and steep-slope asphalt roofing projects across North America that demonstrate an exceptional level of innovation, complexity, beauty, and value. The awards program honors asphalt roofing craftsmanship while highlighting best practices and quality in the roofing industry. This has become an industry-wide competition, covering the full spectrum of asphalt roofing systems.

ARMA is now accepting submissions for the 2023 Excellence in Asphalt Roofing Awards Program. ARMA encourages roofing contractors to submit their best residential and commercial asphalt roofing projects from the past three years for consideration by December 1, 2022.

Below are frequently asked questions about ARMA's awards program and how to enter the 2023 Excellence in Asphalt Roofing Awards.

WHAT IS THE ARMA EXCELLENCE IN ASPHALT ROOFING AWARDS PROGRAM?

For over 10 years, the awards program has celebrated excellence in the asphalt roofing industry. Each year, ARMA receives submissions showcasing asphalt roofing products as the ideal solution for steep- and low-slope projects. The program provides industry professionals an opportunity to display their work, gain inspiration for future projects, and share their enthusiasm for the roofing industry. The competition also represents part of ARMA's efforts to educate homeowners on the utility of asphalt roofing and the top contractors installing the material. These award-winning projects illustrate the beauty, affordability, and reliability of residential and commercial asphalt roofing systems.

HOW DOES JUDGING WORK?

A distinguished panel of judges convenes to critique and select the best asphalt roofing projects. The judging panel is comprised of a cross-section of roofing industry experts with extensive experience and technical proficiency.

Projects will be judged in four categories:

- Beauty – Does the project embody either an aesthetic beauty or does it demonstrate beautiful technical complexity? Is it visually attractive and/or does it contain challenging technical obstacles overcome through innovative use of asphalt roofing materials?
- Performance – Does the project demonstrate asphalt roofing's reliability, durability, and overall system strength?
- Asphalt: The Roofing Solution – Why was asphalt chosen for this project?
- Distinction – Is the project distinct from its peers?

WHAT DO WINNERS RECEIVE?

Winners must demonstrate a high degree of asphalt roofing skill, shining a light on the complex workmanship and high-quality products involved in the individual projects.

In recognition of their achievement, the winners (Gold, Silver, and Bronze) receive:

- A cash prize (Gold – $2,000; Silver – $1,000; Bronze – $500)
- Features in national roofing and/or building and construction publications
- Press releases notifying industry trade press and local media
- Social media promotion
- Formal recognition during the International Roofing Expo (IRE) and the opportunity to network with major asphalt roofing manufacturers
- An official ARMA certificate and other authority-boosting materials
- Recognition on the ARMA website for the winning project

ARMA encourages roofing contractors to submit their best residential and commercial asphalt roofing projects from the past three years for consideration by December 1, 2022.

HOW MANY WINNERS ARE THERE?

There are three recipients of the ARMA Excellence in Asphalt Roofing Awards Program – Gold, Silver, and Bronze. In addition, three honorable mentions are selected each year.

WHAT TYPES OF PROJECTS ARE ELIGIBLE?

ARMA encourages a diverse array of submissions, including residential, commercial, low-slope, and steep-slope projects. No matter the size or complexity, ARMA welcomes all types of asphalt roofing projects for consideration.

IS THERE AN APPLICATION FEE?

There is no charge to participate in the program. It's free to apply.

CAN AN APPLICANT SUBMIT MULTIPLE ENTRIES?

An applicant may submit multiple entries as long as each project was completed in the last three years and meets the specified judging criteria.

WHAT IS THE SUBMISSION PROCESS?

The submission process is fairly simple. Submissions, which require a project questionnaire and high-resolution images, must demonstrate the benefits of asphalt roofing and top-notch artistry. When completing the form, clearly explain why asphalt was used on the project and upload the photos.

WHAT IS THE COMPETITION TIMELINE?

The competition runs from August to December every year. The deadline to submit your application for the 2023 Excellence in Asphalt Roofing Awards Program is December 1, 2022.

WHY ENTER THE AWARDS PROGRAM?

In any industry, a commitment to excellence and an award-winning track record exemplifies the quality of services. Documenting successful projects that illustrate the benefits of asphalt roofing systems will help professionals build portfolios and homeowners find the best value available in roofing today.

Award recognition can assist with public relations efforts, sales, and customer loyalty, as well as build culture among employees. Furthermore, there is nothing better than sharing the success of a job well done. Award winners receive monetary prizes and recognition in national trade media, local media, and on ARMA's website and social media. By submitting notable roofing jobs for consideration, applicants have the opportunity to differentiate the quality of achievements and services from competitors.

HOW DOES AN APPLICANT ENTER?

The 2023 Excellence Awards submission form, along with the full program guidelines, can be found at www.asphaltroofing.org/excellence. ●

BEST PRACTICES

RECOMMENDATIONS FOR INSTALLATION OF ASPHALT ROOFING SHINGLES IN COLD WEATHER

By The Asphalt Roofing Manufacturers Association (ARMA)

Editor's Note: *The Asphalt Roofing Manufacturers Association (ARMA), has prepared many technical reports to aid roofers in the proper installation of various roofing systems. ARMA [https://www.asphaltroofing.org/] has granted permission to publish this report for the benefit of asphalt roofers.*

Asphalt shingles have been used successfully in cold climates for over one hundred years. Improved application efficiency, and more importantly, enhanced long-term shingle performance, can be achieved by following the cold weather application recommendations outlined below:

• Be sure to follow the manufacturer's installation instructions carefully, as most building codes require, including manufacturer recommendations about cold temperature application and proper storage and handling of accessory components used in the installation of an asphalt shingle roofing system.

• Be very careful when working on sloped roofs. In winter applications, there may be nearly invisible ice or frost build-up on the roof or deck surface, which can make work extremely hazardous. It is advisable to wait until the roof surface is free of ice and frost for safer shingle roof application.

Avoid bending, throwing, or dropping bundles of shingles in cold weather.

• Use caution when handling bundles of shingles and individual shingles in cold weather as they may crack, or in severe cases, break apart. Choose an installation temperature where the shingles are sufficiently flexible to facilitate installation. As with most materials, asphalt shingles tend to become less flexible as temperature decreases. Refer to manufacturer instructions for specific directions related to cold weather installation temperature.

Note that when cold, shingle bundles will tend to keep the shape of the surface upon which they are stacked. When nailing, make sure the shingles are flat; otherwise, the nail may break through the shingle surface during installation. Avoid bending, throwing, or dropping bundles of shingles in cold weather. For best results, store shingles indoors to keep them warm prior to application.

• Use extra care (including warming of shingles) in applications where lifting or bending the shingle is required, such as racking applications, hip and ridge shingles, or at valleys. Lifting or bending may cause the shingles to crack or break during or after installation.

• Most asphalt shingles include thermally activated asphalt sealant, which bonds the shingles together after

they are applied to the roof. Sealing time will vary depending on the slope of the roof, its orientation, and the amount of sun/heat exposure that the shingles receive. To provide improved protection from wind blow-off in very cold weather, asphalt shingles can be hand-sealed with an approved asphalt roofing cement or other adhesive acceptable to the shingle manufacturer and in accordance with their installation requirements.

• Consider the use of open metal valleys in cold weather. Woven and closed cut valleys require shingles to be bent, which may result in shingle damage.

ADDITIONAL CONSIDERATIONS

• When re-roofing over an existing roof in cold weather, take extra care to ensure that the roof surface is smooth and flat. If shingles are affixed to an uneven surface in cold weather, that uneven appearance may be "locked in." Even with the return to warmer weather, the shingles may not be able to completely relax to a smooth-looking finished roof.

• Ensure that the attic space is adequately ventilated.[1]

• Install polymer modified, self-adhering underlayment as ice dam protection in regions susceptible to ice damming. Self-adhering underlayment provide protection against damage from water backup from ice dams that can occur at the eaves of the roof.[2] Asphalt saturated felt may be used as an alternative ice dam protection when applied per the manufacturer's application instructions and the requirements of the building code.

• If roof maintenance or inspection is required in cold weather, take special care when walking on shingles. Shingles applied to an uneven surface, or that are slightly curved or buckled, are very susceptible to breakage underfoot in frigid weather. For some sealants, the bond between courses becomes less flexible in cold weather and roof traffic may break the sealant bond. In such cases, it may be necessary to hand-seal these shingles.

• Certain North American regions receive very high snowfall amounts, requiring snow and ice removal from the roof. Extreme caution must be taken when removing snow from the roof so that the shingles are not damaged by shovels, scrapers, or foot traffic. ●

[1] *For more information on this topic, consult the ARMA Technical Bulletin, Ventilation and Moisture Control for Residential Roofing.*

[2] *For more information on this topic, consult the ARMA Technical Bulletin, Preventing Damage from Ice Dams.*

By David A. Rockman and
Jessica L. Rosenblatt

MATERIAL UPDATE

EPA CONSIDERS DESIGNATING PVC AS HAZARDOUS WASTE: POTENTIAL IMPACTS TO THE CONSTRUCTION INDUSTRY

Polyvinyl chloride, better known as PVC or vinyl, is one of the most commonly used plastic polymers in the world. However, following a long-awaited settlement agreement with environmental advocates earlier this year, EPA is now tasked with determining whether PVC should be regulated as a hazardous waste.

On May 4, 2022, EPA published notice of a proposed consent decree that would resolve allegations by the Center for Biological Diversity (CBD) that it unreasonably delayed in acting on a 2014 petition to list discarded PVC as hazardous waste under the Resource Conservation and Recovery Act. Under the agreement, EPA must issue a tentative decision on classifying the material as hazardous waste by January 20, 2023, and a final decision by April 12, 2024.

PVC is the most commonly used plastic in the building and construction industry due to its low cost and durability.

BACKGROUND

PVC is the most commonly used plastic in the building and construction industry due to its low cost and durability. It is a mainstay in building and construction materials so much so that it is known as the "infrastructure plastic." Industry estimates indicate that upwards of 70% of all PVC produced is used for building and construction, where it is commonly found in windows, pipes, ductwork, roofing, flooring, and cables. Outside of the building and construction industry, PVC is readily used to make children's toys, medical devices, clothing, electronics, household goods, consumer packaging, and many other products.

Approximately seven billion pounds of PVC are discarded each year in the United States with experts anticipating those amounts will only increase in the near future. Additionally, PVC makes up a substantial portion of ocean litter, which already consists of as much as eighty percent lightweight and durable plastic trash. A significant portion of discarded PVC products are attributed to the building and construction industry.

Some experts believe PVC may cause health problems, including reproductive harm, abnormal brain development, obesity, liver damage and cancer. CBD has argued for its regulated disposal for nearly a decade, asserting that it is toxic to human health, wildlife, and the environment, particularly after its disposal when CBD further asserts that harmful components may leach out of PVC and contaminate the surrounding environment.

CBD's petition not only asks that PVC be regulated as a hazardous waste at the initial chemical manufacturing stage but also at the stage of finished materials and products. This could have significant consequences for industries like building and construction that utilize and discard large amounts of PVC on a regular basis. If EPA proceeds with listing PVC as a hazardous waste, it will be tasked with developing a comprehensive framework

for regulating its safe use, storage and disposal. Common materials, such as discarded PVC drill cuttings and leftover PVC pipe and flooring, would likely be regulated as hazardous waste.

DEFINING HAZARDOUS WASTE

Regulation of discarded PVC materials as hazardous waste would impose a host of regulatory requirements across a broad spectrum of businesses and activities. Initially, it is important to note that a material is not a hazardous waste until it is first a "waste." Under federal law, a material is only a waste once discarded or abandoned, although the regulatory structure becomes more complex for materials that are recycled or reused in some manner.

Because hazardous waste regulations are only triggered once a material becomes a waste, PVC materials that are in inventory and/or being used are not subject to hazardous waste regulations. Those actually used or installed in a project are similarly free from regulation. However, PVC materials that are left over from a project and not subject to being reused or used elsewhere, such as cut-off scraps and damaged pieces, would be considered waste, and therefore could potentially be considered hazardous waste if EPA elects to regulate PVC.

Importantly, while excess PVC materials not used on a project can be collected and stored pending future use without being considered waste, these materials would have to have a legitimate potential future use. They cannot simply be stored indefinitely under the guise of being stored for future use if there is no realistic chance that they will be used within a reasonable time frame.

Typically, a hazardous waste evaluation begins once a material is considered waste. At that point, the party that is generating the waste (in a construction project, most typically the party that is using the PVC material) needs to determine if it is hazardous. Whether a waste is hazardous depends on how it is classified in the relevant regulations.

There are two basic types of hazardous waste: listed hazardous waste and characteristic hazardous waste. Listed hazardous wastes are materials that are specifically identified in the regulations as being hazardous. They are described in terms of the type of substance and/or the process that generated the substance. Characteristic hazardous wastes are designated based on four categories - toxicity, reactivity, ignitability and corrosivity – pursuant to specifications listed in the regulations.

LOOKING AHEAD

It is expected that any designation of PVC materials as hazardous waste would be done by creating a new category of listed hazardous waste specifically for PVC materials. This would allow for distinctions to be introduced between certain types of PVC materials and/or based on the project or process that resulted in the generation of the PVC waste.

It is unlikely that hazardous waste classification for waste PVC materials would be based on volume or amount of PVC waste, or at least not solely based on volume or amount, since this is a factor that could potentially be easily manipulated to avoid the application of the regulations. The hazardous waste program does contain distinctions related to the amount of waste created, but those apply on a generator level – for example, the amount of hazardous waste that a company produced within a month or a year. These volume-based distinctions apply to all hazardous waste created by a company and affect aspects of the hazardous waste program such as storage of waste and reporting obligations. They do not affect other substantive requirements such as proper handling and disposal of hazardous waste.

HAZARDOUS WASTE REQUIREMENTS

Broadly speaking, the basic elements of hazardous waste regulations govern how hazardous waste materials are handled and disposed. Employees that handle hazardous waste are required to be trained, and facilities where hazardous waste is generated or stored are subject to contingency planning requirements. Hazardous wastes can only be stored in designated storage areas, are subject to labelling requirements, and can only remain in storage for set periods of time before they have to be disposed (the

length of time depends on how much hazardous waste is created by the generator). Hazardous waste manifests are required for the shipment of hazardous wastes.

Hazardous waste requirements are imposed at both the state and federal level, although the requirements tend to be nearly identical. The federal requirements, administered by the US Environmental Protection Agency (US EPA), set the minimum requirements, and individual states can regulate more stringently if they so choose. In practice, most states adopt or incorporate the federal hazardous waste program with essentially no changes. Both US EPA and the state environmental agency can enforce these hazardous waste requirements.

CHALLENGES ASSOCIATED WITH PVC

The potential regulation of PVC waste as hazardous waste presents unique issues because of the pervasive use of PVC in building materials. Such regulation would be unique in that it would affect a vast number of companies, projects and activities that do not otherwise trigger hazardous waste regulations. Many of the affected parties will not have familiarity with the hazardous waste program or the nuances necessary to achieve and maintain compliance. Further, such regulations will impact job sites where the property in question is not owned by the contractor generating the PVC waste and where such contractor may have limited control over activities on, and access to, the property. This scenario introduces significant complexities as compared to the generation of hazardous waste at a traditional manufacturing facility.

Hazardous waste regulation of PVC materials will increase both cost and risk associated with construction and demolition projects. Cost will increase arising out of on-site management responsibilities as well as from increased costs for disposal of waste PVC materials. There will also be liability risk associated with the disposal of PVC materials, if done improperly. Insuring against environmental liability risks tends to be complex at best, and frequently cost-prohibitive.

PUBLIC COMMENT

The public will have the opportunity to comment on US EPA's decision whether or not to regulate PVC waste as hazardous waste, and also to comment on any rule proposed by US EPA to accomplish such regulation of PVC waste materials. ●

David Rockman *is a member in Eckert Seamans Pittsburgh office and chair of the firm's environmental practice group. Mr. Rockman helps clients manage environmental compliance and environmental risks and assists them with understanding and meeting their legal obligations with respect to federal, state, and local environmental laws, regulations, and permits.*

Jessica Rosenblatt *is an associate attorney at Eckert Seamans Pittsburgh office, helping clients address the challenges arising under federal and state environmental laws. She advises on compliance issues, navigates permitting processes, manages environmental risks in transactions, and helps resolve environmental disputes and enforcement actions.*

By Ray Smith, AppliCad

COURSE BY COURSE

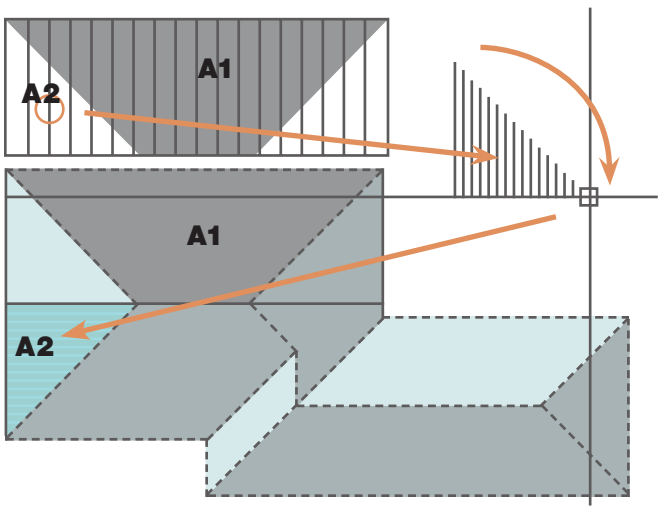
SIMULATION VERIFIES THE ACCURACY OF YOUR BID

In most engineering disciplines that involve the creation of new products, simulation of various processes are an essential part of the development cycle. The simulation of any process tests the accuracy and validity of the designers' intentions while exploring the most cost effective way to complete a project.

In much the same way, preparing a roofing or cladding quotation based on the simulated application of materials to a 3D roof and wall model establishes exactly what is required to complete the job, thus providing the most precise material list and labor summary you can achieve. All this while minimizing waste and ensuring the most efficient installation.

The most graphic use of the simulation of material application is the ability to set the way the material is applied. With the right software tool kit, you will optimize the re-use of offcuts thus reducing waste. In many complex roof situations, the waste can be reduced to virtually zero, just by flipping the offcut into another area of the roof.

Below is an example of what we call 'Block-Cut' where a full length panel is cut and the off-cuts used – one cut, two panels.



The software prepares a layout 'map' to aid installers achieve the results planned for by the estimating team. This reduces waste, speeds up installation and helps keep the site clean and tidy. You can even output a layout map for small form roofing products such as tiles and shingles, ordering the correct quantity of material and making the intentions clear for everyone involved.

> Simulating the application of all the roof materials and using the results to extract accurate quantities and costs builds confidence and trust in the take-off process.

When the system has all inventory items correctly associated, the simulation of the application of the material - whether metal panels, tiles or shingles – the system extracts the correct number of clips, brackets, screws, sealant, underlay and even insulation, and calculates the cost to install everything. The only constraint being the amount of detail you setup at the start. The calculations are almost instant and perfectly accurate.

Below is an example of how to figure metal tiles accurately – 'course by course' and accounting for re-use of offcuts from valleys into hips as appropriate.

AppliCad uses true 3D modelling and simulates piece-material application panel-by-panel or course-by-course, which guarantees accuracy of the take-off if the PDF plan and live site measurements match. ●

COMMERCIAL GUTTER SYSTEMS

MAKING IT WORK

By Linda Schmid

Everyone knows that standing water on the roof is not a good thing; it can lead to roof degradation over time. How do you know if the gutter system you are installing on a large commercial roof will be sufficient?

There are many considerations involved in setting up a good system.

COMMON MISTAKES TO AVOID

-Gutter Sizing

Take the roof size and the pitch into consideration when choosing a gutter size. If the gutter is too small, it may be unable to keep up with heavy rainfall which can lead to damage to the gutter and eventual degradation of the roof in that area.

-Gutter Hanger Spacing

If spaced too far apart, the drag on the gutters can be too much and they can start to sag, leading to pooling water. Eventually the gutters may separate from the building.

-Improper Gutter Pitch

If pitched too sharply, the water may slosh out of the gutters. If the gutters aren't angled enough, water can have a tendency to sit in the gutter, especially if anything creates the slightest obstacle inside the gutters. Both of these situations can cause gutter damage as well as foundational damage in that area of the roof.

-Too Many Seams

Seams are the weakest point in a gutter, so a system with the fewest seams possible is the best to avoid leaking.

-Poor Downspout Placement

How many downspouts you use and where you place them is important. If there aren't enough downspouts to handle the amount of water entering the system, the water will overflow the gutters. If there is more water entering the gutters in one area than another due to the roof configuration, you want to be sure to have plenty of downspouts to handle the load. Improper placement can also lead to standing water, insect infestation, and damage to the roof or siding.

KEY CONSIDERATIONS

Harry Schouten at Advanced Architectural has some advice on gutter installation. He states that bigger roofs should have at least 7" box gutters. A 7" box gutter with one 4" x 5" downspout for 30' of gutter is the standard he recommends for buildings up to 3,200 feet at 0-3/12 pitch. A 7" box gutter holds approximately 1 gallon of water per foot. (One gallon of water weighs over 8 pounds.)

Gutter pitch does not really affect the gutter size much, Schouten says. It's just a helper to move the water to the outlet/downspout. A lot of architects call for 1/8" per foot pitch in the gutter systems they plan. However, Advanced Architectural has found in their 25 years that the gutter system will work with less pitch: a 1/8" drop in 2' should do it. "You need a little pitch to get the water moving. Once it flows, the rest will follow."

That said, many contractors hang gutters with no pitch. Commercial gutters hold a lot of water, approximately 1 gallon of water per foot, and it will find the outlet. There are exceptions; more pitch may be needed when the roof is not level. This is common in older buildings, not so much in buildings with steel trusses. Pitch is also needed in cases where there are limited ground drains.

Roof material should not be an issue as long as the roof is pitched to the gutter edge.

Most buildings can get by with a 7" box gutter and 4" x 5" downspouts because the gutter is there to catch the water, not to hold it. The number of downspouts is the important issue. Bigger roofs should have a 7" box gutter at minimum, but whether you are limited on downspout location also makes a difference. On some large buildings, such as big box stores, 10"-12" box gutter with 6" x 6" or 8" x 8" downspout is required because of drain locations.

Building location does not make a difference according to Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) except for buildings in gulf coast states and Oklahoma where gutters may have to deal with harsh elements.

Guttersupply.com supplied information for this article. Smacna.org has specific recommendations regarding gutter systems needed for a project.

By the CFFA - Vinyl Roofing Division

HEAT ISLANDS

PVC ROOFING HELPS REDUCE URBAN EXTREME HEAT

The term "heat islands" might conjure images of a relaxing tropical getaway, but the truth is far more serious. It describes the phenomenon of cities being markedly warmer than surrounding communities, and the destructive effects inherent to it. Daytime temperatures can average up to 7 degrees hotter in urban settings, with the possibility of isolated spikes of over 22 degrees hotter.

Why? Because the topography of an urban area is covered with man-made structures such as buildings, roads, and other infrastructure that absorb and re-emit the sun's heat more than natural landscapes such as forests and bodies of water. Urban heat islands cause increased energy consumption, higher emissions of air pollutants and greenhouse gases, as well as compromised human health and comfort.

It's a problem that is increasing, with the number of recorded extreme hot days nearly doubling since the 1980s.

Use of sustainable PVC membrane roofing can help reduce the urban heat island effect and its consequences. A white PVC roof can reflect 80% or more of the sun's rays and emit at least 70% of the solar radiation a building absorbs. A dark-colored asphalt or rubber roof only reflects between 6 and 26% of solar radiation, resulting in greater heat transfer to the building interior and greater demand for air conditioning.

The U.S. EPA has identified cool roofs as a key strategy in mitigating heat islands, citing their ability to reduce energy use, air pollution, and greenhouse gas emissions, while improving

health and comfort. A cool roof transfers less heat to the building below and can reduce air temperatures inside buildings with and without air conditioning, helping to prevent heat-related illnesses and deaths.

PVC roofing meets the emittance and solar reflectance index criteria for LEED, Green Globes, and California's Title 24. It is a high-performing, low slope, single-ply roofing solution that has protected and kept buildings cool in climates around the world for decades. Regardless of climate, when the sun beats down, a cool roof will counteract the effects of heat islands to keep ambient temperatures low.

In addition to the obvious cooling benefits, the long service life of PVC roofing membranes — combined with recyclability, relatively low use of non-renewable resources, inherent energy efficient characteristics, and suitability for green roof assemblies — make them the sustainable choice among commercial roofing systems. ●

About Chemical Fabrics and Film Association — Vinyl Roofing Division: *The Vinyl Roofing Division of the Chemical Fabrics and Film Association [https://vinylroofs.org/] was created to educate architects, specifiers, building owners and roofing contractors on the attributes of PVC/vinyl as a durable, reflective, heat-weldable material for single-ply roofing systems. Representing all of the leading manufacturers of thermoplastic PVC roofing systems in North America, the Division is committed to making available sound, scientifically backed information on the environmental and functional performance of energy-efficient PVC roofing membranes.*

Shield Wall Media

BUILDING PROGRESS AWARD

Official Nomination Form

Name of Nominee: _____

Mailing Address: _____

Email address: _____

Telephone: _____

Company/Position: _____

If retired, most recent position held: _____

Professional Achievements: _____

Association Affiliations & Offices Held: _____

Years in the Construction Industry: _____

Nominated By (name): _____

Mailing Address: _____

Email address: _____

Telephone: _____

Title/Company: _____

Relationship to Nominee: _____

Please describe why this person should receive the Shield Wall Media Building Progress Award.
How have they influenced or advanced the construction industry?

Signature: _____ Date: _____

Email the completed form to one of the editors.

Questions? Contact an editor:
Karen Knapstein: 715.513.6767; karen@shieldwallmedia.com
Linda Schmid: 920-659-6319; linda@shieldwallmedia.com
Anthony Brass: 920-455-5118; anthony@shieldwallmedia.com

Mail To:
Shield Wall Media
ATTN: Editors – Building Progress
PO Box 255
Iola WI 54945

3RD ANNUAL

Construction Rollforming Show

ERNEST N. MORIAL CONVENTION CENTER

• NEW ORLEANS, LA •

OCTOBER 26-27, 2022

ENTRANCE FEE: $50 in advance - $75 at the door
(Includes all educational programming)

TO EXHIBIT: gary@shieldwallmedia.com • 715-252-6360

TO REGISTER: https://bit.ly/CRS2022show

EDUCATIONAL PROGRAM TOPICS:

- Condensation prevention
- Coil irregularities
- Sales process 1
- Sales process 2
- Leasing and Financing
- Pre Cut vs. Post Cut
- Integrating peripherals
- Roll former maintenance
- Using OEM to increase throughput
- Ventilation for metal roofs
- What can you make with a brake
- Retooling vs. recalibrating
- Used vs. new machines - life cycle cost
- Applications for portable machines
- Clamps for accessories and solar
- Sourcing coil in a competitive marketplace

(Topics subject to change)

FOR HOTEL RESERVATION:

Omni Riverfront Hotel

WEB: https://bit.ly/OMNIHOTELCRS
PHONE: 1-800-THE-OMNI
ROOM RATE: $179
Reference Construction
Rollforming Show for discount

SHOW SUPPORTERS

MRS Metal Rollforming Systems
SWI Machinery
TUFTEX Master Series by Onduline North America
United Steel Supply
ASC
DRIPSTOP Condensation control
Drexel Metals Roofing Systems + Custom Fabrication
Dynamic Fastener
smartbuild systems
The Bradbury Group
Hershey's The Metal Meister
Acu-Form Roll Forming Equipment
Beck Automation
AkzoNobel

BY ROOFING ELEMENTS STAFF

FRSA ACTION IN DAYTONA BEACH

100TH CONVENTION, TRADE SHOW WELL ATTENDED

Attendees mill about as badges are scanned upon entry to the Florida Roofing & Sheet Metal Expo in Daytona Beach, Florida.

Direct Metals Inc. showcased products from its residential shingle line like Bullet Boot pipe flashings and the new Stealth low profile Off Ridge Vent, metal roof fasteners like the PanClip Pancake and Wafer head screws and SCAMP 304SS Cap long-life screws. Find DMI at the Construction Rollforming Show in New Orleans, Oct. 26-27.

Brenda Brown answers inquiries in the Innovative Energy booth. The company offers reflective insulation solutions for roofers. Find Innovative Energy at the Construction Rollforming Show in New Orleans, Oct. 26-27.

FRSA's convention consists of three full days of education, networking, family fun, sports and friends, along with FRSA's trade show, the Florida Roofing & Sheet Metal Expo. The 2022 Florida Roofing & Sheet Metal Expo was held at the Ocean Center in Daytona Beach, Florida, July 20-22. The Expo was held in conjunction with FRSA's 100th Anniversary Convention; the organization's very first convention was held in Daytona Beach a century ago.

Booth spaces were fully booked months ahead of the event; the Expo floor hosted more than 230 exhibitors, which filled 458 booths. With two dozen continuing educational credit seminar hours available, attendees were able to fulfill at least some of their CEU requirements. (The State of Florida requires every licensed contractor operating in the state to earn 14 hours of continuing education credit during a two-year cycle.)

Overall, exhibitors were pleased with their Expo experience. Attendees were engaging and abundant.

"Triangle Fastener has been a proud participant of the FRSA Show for 28 years and counting," said Jaron Proulx, National Roofing Specialist, Triangle Fastener Corporation. "FRSA once again brought together vendors, contractors, and manufacturers together to share product knowledge and strengthen our partnerships, both current and new. This year's show celebrated the 100th Anniversary of FRSA, and the turn out surpassed expectations. TFC can't thank enough, everyone who attended, to make this year's show a success!"

SUBSCRIBE NOW!

Shield Wall Media brands are dedicated to serving the information needs of construction professionals.

SCAN TO SUBSCRIBE

SUBSCRIBE ONLINE: shieldwallmedia.com/subscribe or fill out & mail form below.

FRAMEBUILDING NEWS | METAL ROOFING MAGAZINE | Rural Builder | Rollforming Magazine | GARAGE·SHED·CARPORT BUILDER | ROOFING ELEMENTS | Metal Builder

FREE 3-YEAR SUBSCRIPTIONS!

1. Please check one or more boxes, sign & date:

I wish to receive: ❑ **Metal Roofing** ❑ **Garage, Shed & Carport Builder** ❑ **Metal Builder** ❑ **Rural Builder** ❑ **Frame Building News** ❑ **Rollforming** ❑ **Roofing Elements**

Signature (REQUIRED): _____ Date: _____

Print Name: _____

Company: _____

Address: _____

City/State/Zip: _____

Phone or Email (REQUIRED): _____

❑ Check this box if you wish to receive the email newsletter associated with the magazine subscription(s) above.

I would like to receive my subscription:
❑ By Mail
❑ Digitally

SWM2022

2. Choose which title applies:
- ❑ President/Vice President
- ❑ Principle/Shareholder
- ❑ Sales Manager or Rep
- ❑ Foreman/Crew Manager
- ❑ Engineer/Architect
- ❑ Other:_____

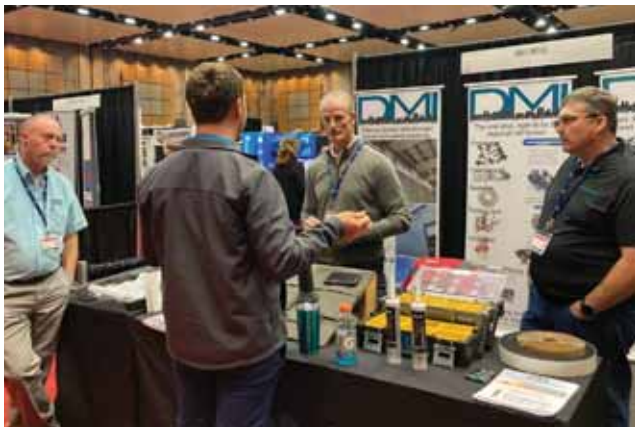
3. Describe your business:
- ❑ Builder/Contractor
- ❑ Dealer/Distributor
- ❑ Manufacturer
- ❑ Engineer/Architect
- ❑ Other:_____

4. Please check all of the types of building or manufacturing you are involved with:

❑ Post Frame	❑ Residential	❑ Metal Roofing	❑ Rollforming
❑ Metal Frame	❑ Commercial	❑ Trusses/Columns	❑ Trim & Flashings
❑ Fabric	❑ Equine	❑ Foundations	❑ Insulation/ Moisture Control
❑ Agricultural	❑ Roofing	❑ Gutters/Snow Retention	

SHIELD WALL MEDIA LLC

MAIL TO:
Shield Wall Media
ATTN: Barb Prill
PO Box 255, Iola, WI 54945

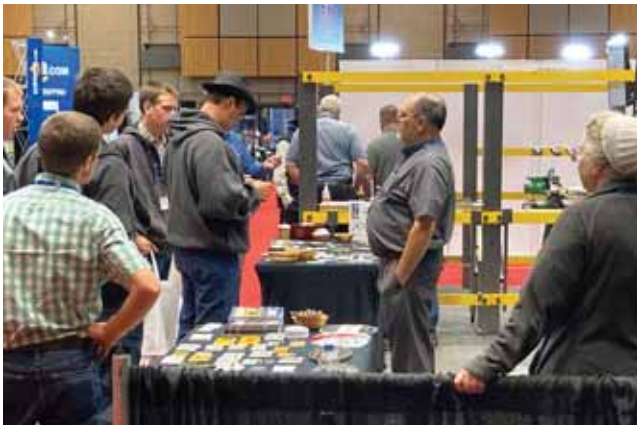


2ND ANNUAL

GARAGE • SHED • CARPORT BUILDER SHOW

GREENVILLE CONVENTION CENTER • GREENVILLE, S.C.

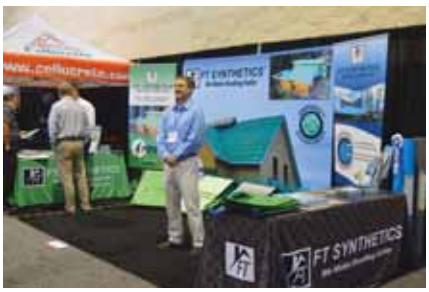
JANUARY 18-19, 2023



PRESENTED BY SHIELD WALL MEDIA,
PARENT COMPANY OF GARAGE, SHED & CARPORT BUILDER MAGAZINE

FOR MORE INFORMATION CONTACT GARY REICHERT:
gary@shieldwallmedia.com • 715-252-6360

MFM Building Products include low-slope roofing membranes, underlayments, and specialized roofing tapes.



FT Synthetics specializes in roofing underlayments, protective coverings, and self-adhered tapes.

Color sealant specialist NPC can color match any metal coating.

David Quehl, Director of Sales & Marketing, Direct Metals, Inc., was pleased with the show. He said, "There were 40 more supplier booths this year than last. The Florida market remains robust in new and re-roof activity. Some suppliers thought the location was too far east for contractors from west Florida to travel."

Representatives of FLAMCO, which has its own centennial on the horizon, are also enthusiastic about their Expo experience. "FLAMCO enjoys the opportunity to exhibit at the FRSA every year," said Vice President of Sales Jeff Bowling. "Being at the show gives us the chance to meet with potential customers, visit with our current partners and generate excitement in what is a key market for our business. In 2023, FLAMCO will celebrate our 100 year anniversary in Florida. We look forward to many more years of growth and success in the state."

Lakeside Construction Fasteners offers fastener and component solutions for roofers and the metal building industry.

Amanda Dunlap, Marketing Manager, Safety Hoist Company, enthused: "FRSA's 100th Expo did not disappoint! We got the chance to show off our

Titanium and Rhino Roof offer a growing portfolio of high-performance synthetic underlayments and self-adhered ice and water barrier products.

HailTrace specializes in weather forensics. The company's storm-chaser truck drew a lot of admiration.

GulfEagle Supply has more than 100 locations nationwide. Attendees enjoyed the "ring-toss" game and the chance to win prizes.

Complimentary Bloody Marys were served up Thursday morning in the Polyglass booth. The company manufactures roofing and waterproofing membranes.

patented electric material hoist and talk with some of the best in the industry. We learned a lot and had a ton of fun with our industry peers. We can't wait to see everyone again next year in Orlando!"

Representatives of Lakeside Construction Fasteners were also impressed: "At Lakeside Construction Fasteners we were very impressed by the solid turn out at the 2022 FRSA Expo that allowed us to reunite with past customers while forging ahead with new opportunities," said Eric Velliquette, VP Sales & Marketing. "The FRSA Organization did another outstanding job hosting this expo in Daytona Beach and LCF looks forward exhibiting at future FRSA Expos!"

LOOKING AHEAD

FRSA's 101st Annual Convention & Expo is scheduled for July 12-14, 2023. Next year's event will take place at the Gaylord Palms Resort & Convention Center in Kissimmee, Florida. Future expo dates: June 5-7, 2024; June 4-6, 2025; June 10-12, 2026. ●

Marco Industries offers high-quality roofing ventilation solutions and accessories.

PAC-CLAD | Petersen manufactures PAC-CLAD metal cladding products in steel and aluminum, available in 70 percent PVDF finish in 46 standard colors. See them at the Construction Rollforming Show Oct. 26-27 in New Orleans.

Berger gutter guard solutions were on display at the Flamco booth. Berger specializes in a wide variety of roofing protection, gutter support, and draining systems.

John Carroccia of On Top Safety Equipment has developed the Life Grab Roof Bracket, the only roof bracket with patented shock absorption. More safety equipment is in the works ... watch for details here in Roofing Elements.

Get Free Business Exposure Here!

COURTESY OF BECKERS GROUP

We publish a Project of the Month in each edition of our magazines to promote best design and construction practices. We have received feedback from readers that it's one of their favorite features in our magazines.

If you're a roofer or contractor, you can receive **FREE NATIONAL EXPOSURE** for your business (free PR!) by sending roof details, a component list, and a brief description. The component list should identify manufacturers and models so we can give them proper credit, too!

The general description can include details about what the customer wanted, special elements, any other features that make the project noteworthy.

These editorial placements are absolutely free!

WHAT WE NEED:

- Component List
- Brief Description
- Three to five attractive high resolution images (at least one must be the entire roof).

Submission is not a guarantee of publication. We reserve the right to edit content.

If you have any questions about the Project of the Month, contact:

Karen Knapstein • karen@shieldwallmedia.com • 715-513-6767

ILLINOIS CHURCH REROOF

POLYISO INSULATION, SHINGLES ENHANCE VENTILATION, DURABILITY, AND AESTHETIC

PROJECT CHALLENGE

Located in Rockford, Illinois, the Rockford Seventh Day Adventist Church is a place of worship that also serves as the home of the Alpine Christian School, a K-8 school focused on providing a "spiritually oriented education for children." When a storm damaged the church's cathedral roof with high winds, the organization reached out to Gary Paris at Atlas General Contractors, a general contracting services company not affiliated with Atlas Roofing Corporation, to assist with the insurance claim and repair the damage.

Based just an hour away in St. Charles, Illinois, Paris and his team at Atlas General Contractors evaluated the damage and the insurance claim, which the church initially had filed as wind damage to the roof shingles. Upon further inspection, Paris also saw that the storm tore off a piece of 4" thick polyisocyanurate (polyiso) insulation leaving a gaping hole that needed to be addressed.

Additionally, because the church was built in the mid-1900s, it lacked adequate roof ventilation, causing heat and moisture to get trapped, increasing the interior temperature and damaging the whole roof system.

APPROACH

Paris and his team worked for several months to ensure the church received the materials and services they required under their insurance policy – a critical portion of which was providing a solution for proper ventilation. Once approved, the team began acquiring materials for the renovation, including AC Foam® CrossVent® nailable cross ventilated roof insulation and Pinnacle® Pristine high performance architectural shingles from Atlas Roofing Corporation.

When it came time to address the project's insulation and ventilation needs, Paris opted for Atlas Roofing Corporation's ACFoam CrossVent, which seemed like the best solution for what they faced and paired it with the company's shingle solution.

INSTALLATION

The Atlas General Contractors team started the planning process by creating sketches for the roof installation to determine the layout and how many product

https://www.atlasroofing.com/

PROJECT OVERVIEW

LOCATION:
Rockford, Illinois

PROJECT SIZE:
162 squares

CONTRACTOR:
Atlas General Contractors

SHINGLES:
Pinnacle® Pristine, Copper Canyon, Atlas Roofing Corporation

UNDERLAYMENT:
Atlas Roofing Summit 60 Synthetic Underlayment

INSULATION:
AC Foam® CrossVent® nailable insulation

squares they would need. There were several unknowns during the process, including how much substrate was below the polyiso insulation and the location of the conduit, which runs below the pine substrate.

Additionally, while the team was in the middle of tearing off the previous roof, they discovered two layers, which consisted of 4" nailable polyiso insulation and three-tab shingles with a layer of Visqueen.

Finally, they needed to determine if the Atlas synthetic felt underlayment could be used as a vapor barrier, which was required by code. And, while working on the south side of the roof, the team found a poorly installed, inoperable vent that, as a result, had severely deteriorated the shingles.

"At the beginning of the project, I connected with Paul Mullins, an Atlas Roof and Wall Insulation sales representative, who reviewed the material performance with me," said Paris. "Paul addressed why it was important to add in the edge vent and make sure we had proper space between the polyiso and oriented strand board (OSB) for enough airflow on the structure to get up to the ridge to ensure it was vented properly. In terms of the screws and application, Paul provided me with information as far as how many screws per panel to use and the nailing

Atlas Pinnacle Pristine shingles in Copper Canyon.

pattern, which was very helpful."

Due to the detailed information provided by Paul and what is available on the manufacturer's website, Paris and his team found the installation to be a straightforward and manageable process. Offering high thermal efficiency, ACFoam CrossVent is a non-structural composite insulation that consists of ACFoam®-II or ACFoam®-III polyiso insulation board and APA/TECO rated OSB or CDX plywood, separated with and bonded to five individual 1.0", 1.5" or 2.0" vent spacer strips.

The Integrity™ EPS Vent Spacers yield a 6000 psf minimum compressive resistance as well as continuous Atlas Nail Base Fastener support across the 4" dimension. This allows for cross ventilation and offers more flexibility in fastening as the vent spacers run the full length of the board rather than small squares.

Atlas General Contractors installed the Pinnacle Pristine high performance roof shingles Copper Canyon. The shingles feature comprehensive warranty coverage against manufacturing defects, unsightly black streaks caused by algae, and damage from high winds.

"I was impressed with how the granules of the shingles adhere to the mat on a steep roof, and there wasn't nearly as much footfall on the install as products we used in the past," said Paris. "Additionally, the Atlas shingles feature 3M Scotchgard™ Protector, a huge selling point to our customers as it helps prevent the ugly streaking nobody wants to see on a roof."

IMPACT

After installing approximately 162 squares of shingles, and cross ventilated polyiso roof insulation, the church not only had a stronger, beautiful, and durable roof, but it also had an R-value of 30, providing more efficiency for the building and increased comfort for the congregation.

"After the project was completed, I spoke with the property manager for the Rockford Seventh Day Adventist Church and asked if the temperature inside the cathedral, which does not have air conditioning, had changed during the hot summer months," said Paris. "He told me it was an unbelievable change and much cooler than it had been before. He also said they were glad to have found the right contractors who fought for the best materials for ventilation and overall performance during our conversation. It was a great thing to hear, and we're proud of how everything came together on this project." ●

Our New Digital Magazine Websites

www.ruralbuildermagazine.com

www.framebuildingnews.com

www.readmetalroofing.com

www.rollformingmagazine.com

www.garageshedcarportbuilder.com

www.roofingelementsmagazine.com

GET MORE INFORMATION ABOUT PRODUCTS & SERVICES SEEN IN THIS ISSUE. HERE'S HOW:

If you are looking for more information from companies featured in this issue, fill out this form.

Mail the completed form to us, and we will have those companies get in touch with you. There's no need to fill out multiple forms; we'll do the legwork for you.

Name (please print)_____

Signature (required)_____

Company_____

Address_____

City_____State_____Zip _____

Telephone (_____)_____

E-mail_____Date _____

Please check one or more boxes to subscribe FREE/Renew for 3 years:

❑ *Garage, Shed & Carport Builder Magazine* ❑ *Frame Building News* ❑ *Metal Roofing Magazine*
❑ *Rural Builder* ❑ *Rollforming Magazine* ❑ *Roofing Elements Magazine* ❑ *Metal Builder*

I would like to receive my subscription: ❑ By Mail ❑ Digitally

❑ Check this box if you wish to receive our Construction Express enewsletter and offers from our partners.
Email address is required to receive enewsletter.

CONTACT NAME & EMAIL (OR) NAME & PHONE NUMBER ARE REQUIRED. WITHOUT THIS INFORMATION WE WILL NOT PROCESS THE REQUEST.

SELECT A MAXIMUM OF 5 COMPANIES TO REQUEST INFORMATION FROM:

Company Name:_____PAGE:_____

Company Name:_____PAGE:_____

Company Name:_____PAGE:_____

Company Name:_____PAGE:_____

Company Name:_____PAGE:_____

I understand that by providing the above information I hereby consent to receive communication regarding my subscription via US Mail, telephone, and e-mail sent by *Roofing Elements Magazine.*

Valid until November 30, 2022 **RE FALL 2022**

CHECK WHICH TITLE APPLIES TO YOU:

❑ President
❑ Owner
❑ Partner
❑ General Manager
❑ Sales Manager/Rep
❑ Engineer/Architect
❑ Vice President
❑ Foreman
❑ Installer
❑ Other_____

PLEASE CHECK THE PRIMARY CATEGORY THAT DESCRIBES YOUR BUSINESS:

❑ Builder, Dealer, Remodeler or Installer
❑ Roofing Contractor
❑ Metal Roofing Contractor
❑ Building Material Dealer/Distributor
❑ General Contractor/Remodeler
❑ Manufacturer/Rep of Manufacturer
❑ Architect/Specifier
❑ Construction Consultant/Engineer
❑ Building Owner/Developer
❑ Other (Please Specify)

_____

ENGAGED IN THE FOLLOWING APPLICATIONS:

❑ Gutters/Accessories
❑ Institutional
❑ Residential
❑ Agricultural
❑ Commercial
❑ Industrial

Send to: Barb Prill • P.O. BOX 255 • Iola, WI 54945; barb@shieldwallmedia.com

ASK THESE ADVERTISERS ABOUT THEIR PRODUCTS TODAY!

THE DM-ARM HAS YOUR BACK!

Drexel Metals Association of Regional Manufacturers (DM-ARM) is a comprehensive portable roll former program designed to help you meet building codes and build your brand locally. The Drexel Metals DM-ARM program allows installers and regional manufacturers to grow their businesses by offering better local control, greater profits, freight savings, less scrap, and the ability to provide metal roofing on-demand.

As a DM-ARM member, Drexel Metals becomes your "back-office partner", allowing your team to spend more time in the local market!

Drexel Metals ARM
ASSOCIATION OF REGIONAL MANUFACTURERS

Become a member at www.drexmet.com.

Sell More with the Roofing Passport

Exclusive to DM-ARM members, the Sherwin-Williams® Roofing Passport is a groundbreaking platform that simplifies metal roof estimation and ordering. As a fully automated program, this digital platform enables project estimation in one click. The Sherwin-Williams Roofing Passport creates a powerful link between EagleView's highly accurate roof measurements and SmartBuild's automated estimation software, creating an easy-to-use bidding platform.

Learn more at www.drexmet.com

SHERWIN-WILLIAMS. ROOFING PASSPORT

1234 Gardiner Lane | Louisville, KY 40213
drexelmetals.com | Toll Free: 888-321-9630 | Fax: 877-321-9638

Drexel Metals
Roofing Systems + Custom Fabrication
A CARLISLE COMPANY