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

ROOFING ELEMENTS

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METAL ROOFING MAGAZINE SPECIAL SECTION

TIPS FOR FIGHTING MOSS

TECHNICAL BULLETIN:
NAIL APPLICATION OF ASPHALT SHINGLES

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EDITOR'S NOTE

BY KAREN KNAPSTEIN

WANTED: Beautiful Roofs

I'm pleased to bring you another edition of Roofing Elements. I'm especially excited about this edition's Project of the Month, which you'll find on pages 16-17. As you'll see, the project has a great story behind it. Upon receiving notification of how much his insurance company was going to pay for his roof's hail damage, something didn't seem right to the owner ... the proposal was "alarmingly low." Read the story to learn about where he turned for help and see his new roof.

The reason I mention the above project, it's everything we look for in a Project of the Month. It ticks all the boxes:

☑ Interesting story
☑ Great photos
☑ List of materials used.

This edition is only the first of four in 2025. That means there are three more opportunities for YOU to contribute a recently completed (within the last couple years) roofing project to be published as a Project of the Month.* And best of all, this is a free editorial opportunity. Your company and the work you do can be published in a nationally distributed magazine and it won't cost you a dime.

Contributing a project is easy. To recap the requirements: We need 3-5 high resolution photos, a list of materials used in the roof (the more comprehensive the better), and a brief description of the project. We've even launched a convenient online portal at https://bit.ly/roofstar so all you need to do is fill in the blanks!

Don't wait! There are only three more opportunities to get a (non-metal) Project of the Month published in 2025. (To contribute a metal roofing project to be published in Metal Roofing Magazine, visit https://bit.ly/MRstar.)

I hope to see your roofs soon! Until next time — be well.

— Karen Knapstein, Editor

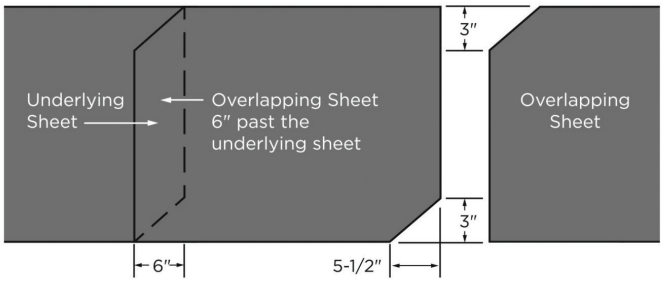
**Submission is not a guarantee of publication. Things that help you get selected: Complete information, clear photos, and a good story!*

BY JOE THOMPSON, CERTAINTEED

JOE KNOWS: THE IMPORTANCE OF MEMBRANE END LAP PLACEMENT

The correct placement of end laps is essential to creating watertight self-adhered roofing systems. Here are some quick tips to keep in mind:

- Make sure all side and end laps are installed with the slope of the roof to ensure that no laps are installed against the flow of water.
- During installation, be aware of end lap placement of the base or interply and cut sheets to length as needed to ensure a 3' offset.
- The end lap should be 4" for base sheet and interply and 6" for cap sheets.
- Cut the corners of the end lap at an angle, alternating sides between the underlying sheet and the overlapping sheet as shown in the diagram.



Joe Thompson *is a key member of the CertainTeed Commercial Roofing Technical Services team and leads installer training courses, which are held throughout the U.S.*

SHINGLE TOMB CUSTOMIZABLE STORAGE CASE

Shingle Tomb debuted its new marketing and referral tool at the International Roofing Expo (IRE) in San Antonio, Texas. This first-of-its-kind product is a professionally branded, heavy-duty storage case designed for roofing companies.

The Shingle Tomb is a custom branded, heavy-duty storage case designed to help homeowners keep extra shingles and essential documents organized, while securing a lifetime of referral marketing for the contractor. Built from durable, engineered materials, it features a sturdy carry handle capable of supporting up to 100 pounds, a designated sleeve for business cards, and an interior water-resistant folder to securely store important paperwork such as insurance documents, contracts and invoices. The product is also fully customizable, allowing roofing companies to prominently display their logos.

www.shingletomb.com

MFM BUILDING PRODUCTS 48" SELF-ADHERED UNDERLAYMENT

MFM Building Products introduced a new product during IRE 2025: 48" Wind & Water Seal self-adhering roofing underlayment. The new product is composed of an embedded traction surface adhered to a high-temperature adhesive rated to 250°F for use under metal roofing systems. Acting as an ice and water barrier, the 48" width eliminates the need to double layer along roof edges in some applications. Self-adhering and self-sealing around fasteners, the product is ideal for use along roof edges, eaves, valleys, and as a whole roof covering for secondary water protection.

The product comes in a 48" x 50' roll size (200 square feet) and is packaged 30 cartons per pallet. Manufactured in the USA, Wind & Water Seal comes with a 10-year limited warranty.

www.mfmbp.com

TECH BULLETIN

NAIL APPLICATION OF ASPHALT SHINGLES

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 asphalt roofing systems. ARMA [https://www.asphaltroofing.org/] has granted Roofing Elements Magazine permission to publish this report for the benefit of roofers.*

The International Building Code (IBC) and the International Residential Code (IRC) require that roofing nails be utilized to fasten asphalt shingles. Proper nailing is essential to good performance. To ensure proper nailing during shingle application, it is required that you follow the shingle manufacturer's instructions and also consider the IBC, IRC, National Building Code of Canada (NBCC), and other applicable codes. The Asphalt Roofing Manufacturers Association (ARMA) supports these requirements (several referenced below) and additional installation recommendations as outlined below.

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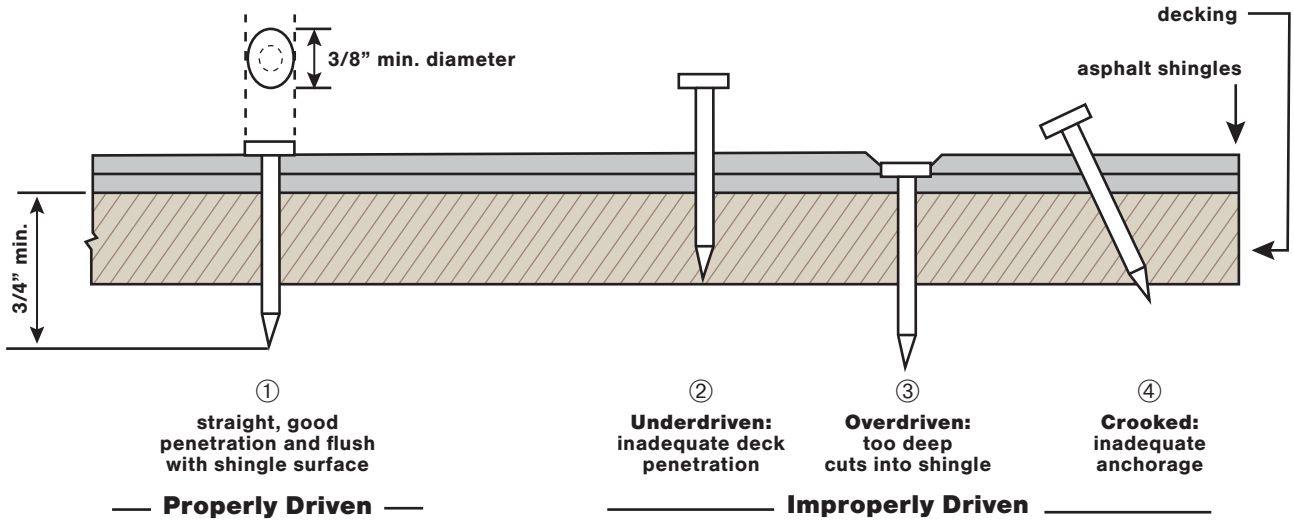
- Nails are required to have a minimum nominal shank diameter of 12 gauge (0.105") (2.7 mm) and a minimum head diameter of 3/8" (0.375") (9.5 mm). See Figure 1 for an example.
- Nails are required to be corrosion-resistant galvanized steel, stainless steel, aluminum, or copper roofing nails. Galvanizing by various processes is the typical means of achieving corrosion resistance. Aluminum roofing nails do not require additional coatings for corrosion resistance.
- Select nails long enough to penetrate at least ¾" (19 mm) into the roof deck. If the deck sheathing is less than ¾" (19 mm) thick, use nails long enough to penetrate through the roof sheathing at least 1/8" (3 mm). In determining nail length, consider the number of layers of shingles, shingle thickness(es), underlayment, hip and ridge caps, and flashing (eaves, rakes, sidewall, valley, etc.).
- If the underside of the deck is exposed to view, using nails of the recommended length will result in the nail points penetrating through the deck and being exposed to view. Consult the roofing material manufacturer and building code requirements for approved alternatives if visible nail points are considered aesthetically objectionable.
- All nails are to be driven by hand or with a pneumatic nailing tool that has been properly adjusted to drive the nails correctly. Failure to use a properly adjusted pneumatic air

Figure 1: Application of Nails



COURTESY OF THE ASPHALT ROOFING MANUFACTURERS ASSOCIATION

system can lead to problems, including, but not limited to, sealing failures, raised tabs, distortions, and blow-offs of shingles.

- For most asphalt shingles, a minimum of four nails is required per full-size strip shingle. For some shingles and application circumstances, the required number of nails may be different. Follow the specific installation instructions of the shingle manufacturer to ensure the intended performance and compliance with building codes.

PLACING AND DRIVING NAILS

Nails that are improperly located and/or driven can lead to sealing failures, blow-offs, raised tabs, and buckling. The following practices reflect the general recommendations of most shingle manufacturers. Follow the specific installation instructions of the shingle manufacturer.

Align each shingle carefully. Whenever possible, make sure that no cutout or end joint is less than 2" from a nail in an underlying course. Start nailing from the end nearest the previously installed shingle and proceed across. This will help prevent buckling. To help prevent distortion, do not attempt to realign a shingle by shifting the free end after more than one nail is in place.

CRITICAL ASPECTS OF NAIL PLACEMENT INCLUDE:

- Never place nails where they will be fully or partially visible after the roof is complete.
- For most shingles with sealant on the top surface, place nails below the sealant strip but above the area that will be visible after the roof is complete.
- Shingles with sealant on the back surface often have a line or lines to indicate the location where the nails are to be placed on the shingle surface.
- For multi-layered laminated shingles, manufacturers may require the nails to be positioned so they penetrate both/all shingle layers. Consult manufacturer's instructions for specific nailing placement/pattern.
- No nail head should be less than 1" (25 mm) from either end of the shingle. The manufacturer's installation instructions typically include specific recommendations for positioning the nails across the shingle.
- Do not drive nails into knot holes, cracks, or spaces in the roof deck.
- Nails are to be applied so the entire head bears tightly against the shingle.

Nails are not to be underdriven, overdriven (to break or cut into the shingle), or driven crookedly. See Figure 1 for examples of properly and improperly driven nails.

Repair incorrectly applied nails immediately. Underdriven nails can be tapped down. Remove overdriven or crooked nails, repair the hole with asphalt roof cement complying with ASTM D4586, and place another nail nearby. If this is not practical, replace the entire shingle.

Consult the ARMA Residential Asphalt Roofing Manual for additional information regarding application of asphalt shingles. ●

BY KAREN KNAPSTEIN

UNDERLAYMENT 101

UNDERLAYMENT TYPES AND THEIR COMMON USES

As roofing professionals, you know that the roof system is only as strong as its weakest link. While most of the focus is often placed on shingles, tiles, or metal panels, there's another critical layer that's just as important in ensuring the longevity and performance of the roof: the underlayment. It's the unsung hero of the roofing system—providing an extra layer of protection against the elements, moisture infiltration, and even contributing to energy efficiency.

With the variety of roofing materials on the market today, it's important to understand which underlayment works best for different roofing systems and conditions. Choosing the right type of underlayment, always following local building codes, not only improves the performance of the roof but also helps meet building codes and delivers long-lasting protection for homeowners. In this article, we'll break down the most common types of underlayment used in various roofing systems and why certain options are better suited for specific roofing materials and climates.

THE BASICS OF ROOF UNDERLAYMENT

Before we dive into the different types of underlayment, it's important to understand what an underlayment does. Roof underlayment is a layer of material installed directly onto the roof deck before the roofing material (like shingles or metal panels) is installed. Its primary purpose is to provide a secondary barrier against water infiltration, prevent leaks, and protect the roof deck from damage.

MFM Building Products Wind & Water Seal. PHOTO COURTESY OF MFM BUILDING PRODUCTS

Titanium X30 underlayment. PHOTO COURTESY OF OWENS CORNING/TITANIUM

Underlayments also enhance air flow which keeps the roof cooler and extends the life of the finished roofing system.

Additionally, when addressing fire resistance in steep-slope roof installations, there are just a few products. One is a nail-down coated fiberglass product that has been in the market for some time. Plus, there are two relatively new asphalt-based self-adhered roof underlayments. This is an important niche that has become a focus after the recent, devastating fires in Hawaii, California, etc.

Choosing the right underlayment is critical, and it's a decision that varies depending on the roofing system, the climate, and the unique needs of the building. Now, let's take a closer look at the various underlayment options available and their best applications.

1. Asphalt-Saturated Felt

Composition: Asphalt-saturated felt, often called "organic felt," is made from paper or fiberglass saturated with asphalt. It's available in two primary weights: #15 and #30 felt, with the heavier #30 variety offering more durability.

Best For: Traditional asphalt shingle roofs, in moderate climates.

Why It Works: Asphalt-saturated felt has been the industry standard for years and is commonly used beneath asphalt shingles. It provides a reliable moisture barrier, especially in moderate climates where rain isn't excessive and temperatures don't fluctuate dramatically. The #30 felt offers increased resistance to tearing. While #30 felt is better than #15 felt, neither does well in windstorms.

Limitations: In climates with high humidity or heavy rain-

PHOTO COURTESY OF CERTAINTEED.

ADDITIONAL RESOURCES

CertainTeed • www.certainteed.com
Kirsch Building Products • www.sharkskin.com
Levi's Building Components • www.levisbuildingcomponents.com
MFM Building Products • www.mfmbp.com
MWI Components • www.mwicomponents.com
Owens Corning/Titanium • www.owenscorning.com
Underlayment Specialties Plus • www.uspunderlayment.com

fall, asphalt-saturated felt may not be the best option. Over time, it can degrade due to moisture absorption, and it tends to tear easily when compared to synthetic alternatives. Its limited water resistance means it may not provide adequate protection in extreme conditions.

Saturated felts also are susceptible to wind damage, often ripping off sections of the felt leaving the roof deck unprotected. Also, felts do not offer much resistance to UV rays, so they need to be covered as soon as possible.

2. Synthetic Underlayment

Composition: Synthetic underlayment is made from materials like polypropylene or polyethylene. It is lightweight, tear-resistant, and often comes with a slip-resistant surface, making it easier to handle during installation. Some versions are breathable, allowing moisture to escape from beneath the roofing material. As asphalt shingles and standing seam metal roofs are considered "vapor bar-

riers," creating an air gap above breathable roof underlayments should be considered.

Best For: Asphalt shingles, metal roofs, and tile roofs in various climates.

Why It Works: Synthetic underlayment is a significant upgrade over asphalt-saturated felt due to its superior durability and resistance to both UV rays and moisture. It is ideal for regions with variable weather conditions, as it provides better protection against water infiltration. Furthermore, synthetic underlayment is much lighter and easier to install, saving time during the roofing process.

Limitations: Synthetic underlayment offers great performance, but it may come at a higher cost than asphalt-saturated felt. Number 30 felt has become more expensive than many synthetic roof underlayments. The best practice is to install a premium synthetic roof underlayment — not commodity-based synthetic roof underlayments installed beneath most asphalt shingle roofs. Its long-term benefits—such as superior durability and better protection—often justify the extra investment. Additionally, while it is more water-resistant, it isn't entirely waterproof. All nailed in place roof underlayments should be installed at 2:12 or greater pitch per building codes.

3. Self-Adhesive Underlayment

Composition: Self-adhesive (self-adhering) underlayment can be made from rubberized asphalt or other synthetic material and features an adhesive backing that sticks directly to the roof deck. All self-adhering/peel-and-stick roof underlayments have a poly and/or paper-based release liner. Some have a split release to offer additional ease in installation.

It is often used in high-risk areas that require extra waterproofing or beneath metal roofing systems that require an underlayment that can withstand high temperatures. Synthetic butyl/ butyl adhesives work better in elevated temperatures, like under standing-seam metal roofs in hotter climates. Some synthetic butyl self-adhered roof underlayments can be installed at colder temperatures than asphalt-based peel and sticks, without the need of priming the substrate.

Best For: High-rainfall regions, areas prone to ice dams, and any part of the roof that requires extra protection from water infiltration.

Why It Works: Peel-and-stick underlayment is an excellent option for areas with frequent rain, snow, or ice, as it provides superior waterproofing and reduces the risk of leaks in vulnerable areas like valleys, eaves, and around roof penetrations. The self-adhering feature also makes it easier to install and ensures that it stays in place without the need for fasteners.

Limitations: This type of underlayment is more expensive than synthetic options and is typically used only in specific situations or areas of the roof that require additional protection. Since it comes at a higher cost, it's essential to assess the project to determine where it's most beneficial.

CONCLUSION

For roofing professionals, using the proper underlayment is essential to ensure the roof system delivers long-term protection and performance. In moderate climates, traditional asphalt-saturated felt remains a reliable option beneath asphalt shingles. However, when weather conditions become more variable, synthetic underlayment offers enhanced durability and water resistance. For regions prone to ice dams and heavy rainfall, self-adhesive underlayment provides a robust, waterproof barrier that effectively shields the roof deck.

Understanding the structure's specific needs, the local climate, and the demands of the roofing system is key. By using the right underlayment, you not only protect the roof from moisture and damage but also enhance its overall resilience and longevity. Ultimately, the correct underlayment is a vital component of a successful roofing system, ensuring that every layer works together to deliver lasting performance.

A key point for self-adhered underlayments is knowing that they are vapor barriers and require proper ventilation to prevent moisture build-up inside the structure leading to mold formation.

The final word: Always understand the specific installation instructions from the manufacturer. Manufacturers provide minimum installation temperature, service temperature, allowable UV exposure, and sealant directives. ●

MWI Components offers several synthetic and self-adhering underlayment products. *Photo courtesy of MWI Components.*

BY THE CHEMICAL FABRICS AND FILM ASSOCIATION - VINYL ROOFING DIVISION

PVC FIRE RESISTANCE

SLOW TO CATCH AND SPREAD; SELF EXTINGUISHING

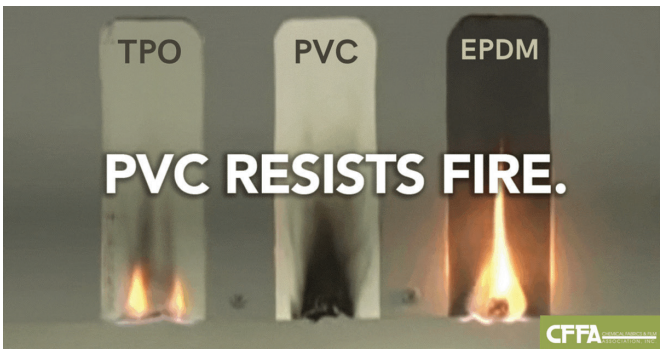
A principle of building material sustainability that isn't talked about enough is durability. After all, a material that is long-lasting requires replacement less often than other materials that perform the same function. Because PVC roofs last longer and are replaced less frequently than many roofing materials, that means less virgin materials being used to produce new roofs and less materials going to the landfill.

PVC roofs have passed applicable FM and UL tests for Class A and B roof assemblies for high and low slope roof applications. UL and FM ratings are specific to individual roofing membrane manufacturers. Check with each company's technical department for company-specific ratings.

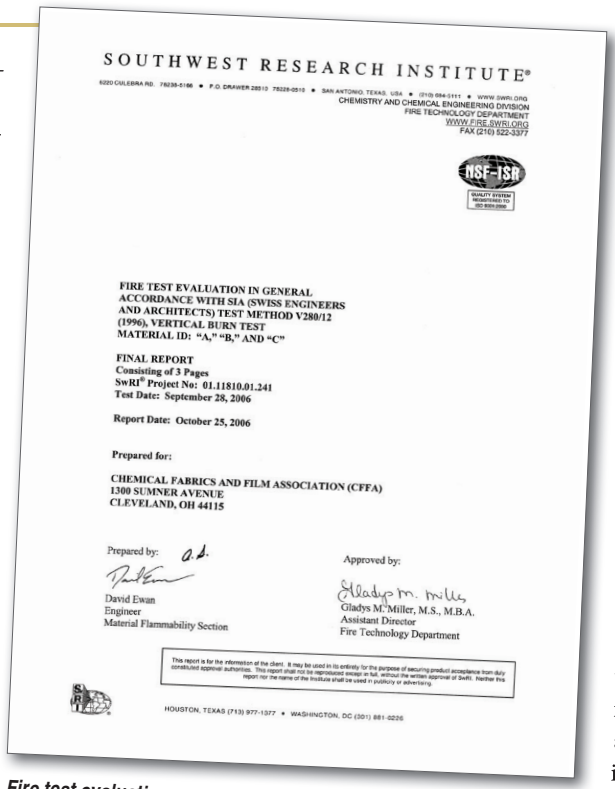
PVC (vinyl) roofing has the distinct advantage of being made from recycled material and being recyclable at the end of its useful life. It is also durable. Case in point: its fire resistance.

According to the Vinyl Roofing Division of the Chemical Fabrics and Film Association (CFFA-VRD; https://vinylroofs.org/), PVC roofing does not support combustion. It is a naturally fire-resistant polymer, making this cool roofing material slow to catch or spread fire — and self-extinguishing when the source of heat or flame is removed. PVC roofs have passed both FM and UL fire testing.

PVC's dramatic fire-resistant properties were tested by Southwest Research Institute's Fire Technology Department. The test compared the behavior of three common commercial single-ply roofing materials — vinyl/PVC, TPO, and EPDM — after being ignited by a Bunsen burner flame.



In the test, the PVC roofing sample self-extinguished in seconds (13 seconds in one, 12 seconds in the other) after the flame source was removed, while the other two samples continued to burn for between three and six minutes before they were completely consumed. [More information: https://vinylroofs.org/durability/pvc-fire-performance/.]



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CHEMISTRY AND CHEMICAL ENGINEERING DIVISION
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NSF-ISR

FIRE TEST EVALUATION IN GENERAL ACCORDANCE WITH SIA (SWISS ENGINEERS AND ARCHITECTS) TEST METHOD V280/12 (1996), VERTICAL BURN TEST MATERIAL ID: "A," "B," AND "C"

FINAL REPORT
Consisting of 3 Pages
SwRI® Project No: 01.11810.01.241
Test Date: September 28, 2006

Report Date: October 25, 2006

Prepared for:

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Fire test evaluation report cover.

This fire resistance is just one aspect of PVC roofing's durability and sustainability. Its heat-welded seams form a permanent, watertight bond that is a major advantage over commercial roofing systems that rely on adhesives, tapes, and caulks to seal the seams. It meets or exceeds wind uplift requirements, with many PVC membranes surviving the onslaught of hurricanes. After a long service life, PVC roofing can be recycled, and new PVC roofing and other high-value, non-roofing products can be made with these recycled components. ●

BY GUARDIAN ROOFING

MOSS MADNESS

GUARDIAN ROOFING'S EXPERT APPROACH TO COMBATING MOSS & ALGAE IN THE PACIFIC NORTHWEST

Roofing professionals in the Pacific Northwest understand the persistent challenge that moss and algae present due to the region's unique climate. With high moisture levels and frequent rainfall, roof maintenance is essential to preventing the damp conditions that foster moss and algae growth. Guardian Roofing, Gutters & Insulation, a trusted name in roofing and home services, has developed specialized strategies to help property owners maintain the integrity of their roofs.

"Roofs retain moisture, particularly in shaded areas, allowing moss to take root," explains Matt Swanson from Guardian Roofing. "Unlike hotter regions where sunlight can dry and kill moss, the Pacific Northwest's cooler temperatures keep surfaces damp longer. Tall evergreen trees and overcast skies mean many roofs receive limited direct sunlight, preventing them from drying out. North-facing and heavily shaded areas are especially vulnerable to moss and algae accumulation."

When conducting roof inspections, Guardian's experts assess critical design factors that contribute to moisture retention. Low-pitch roofs tend to hold water longer, accelerating moss growth. Additionally, poor drainage and clogged gutters exacerbate the problem by trapping excess moisture on the roof's surface.

"The structural and aesthetic damage caused by moss and algae can significantly shorten a roof's lifespan," continues Swanson. "Moss roots can lift shingles, leading to leaks and water damage, while algae create dark streaks that not only reduce curb appeal but may also impact home value. DIY removal can be hazardous due to slippery conditions and roof height, which is why we always recommend a professional inspection in the spring to mitigate potential problems before they worsen."

Guardian Roofing's comprehensive assessment process includes evaluating moss and algae growth, checking for roof damage such as lifted shingles, leaks, degranulation, and clogged gutters. Based on the roof's material and condition, a customized treatment plan is then implemented to restore and protect the roofing system.

"The best way to prevent moss is through consistent maintenance, keeping roofs free of dirt and debris," advises Swanson.

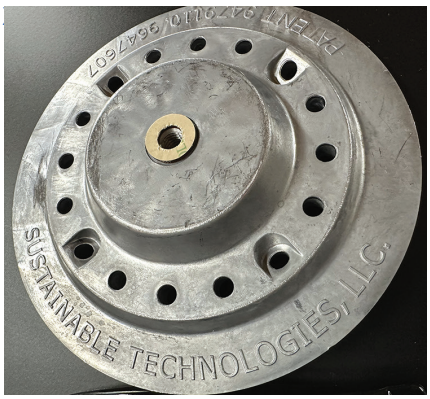
"We recommend an annual full roof inspection and moss treatment. However, homes in heavily wooded or shaded areas may require cleaning every six months. The team at Guardian is committed to helping homeowners in the Pacific Northwest preserve their roofs, ensuring durability and peace of mind year-round."

By staying proactive with regular inspections and treatments, roofing professionals can help homeowners combat moss and algae, extending the longevity of their roofing systems in this moisture-rich environment.

About Guardian Roofing, LLC

Founded in 2005, Guardian Roofing, LLC is an award-winning professional roofing contractor in the Portland and Seattle markets including the Washington State counties of King, Pierce, Snohomish, Kitsap, Clark, and Thurston; and now Oregon counties of Marion, Washington, Multnomah, Clackamas and Yamhill, serving the entire Pacific Northwest.

Founders Lori and Matt Swanson have more than 60 years of combined roofing experience and employ a team of more than 100 skilled and professionally certified craftsmen who assist customers with their roof, gutter, attic, masonry, and skylight needs. ●



S-5! Facet Mount™ for single-ply roofs. *Photo courtesy of S-5!*

S-5! FORMS STRATEGIC JOINT VENTURE TO OFFER FACET MOUNT™ SOLUTIONS

S-5! announces an exciting new strategic joint venture with Sustainable Technologies, LLC, aimed at driving innovation while expanding its rooftop attachment portfolio.

This collaboration will focus on the research, development and commercialization of the patented Facet Mount™, a universal mounting solution designed for single-ply roofs, including TPO, PVC and KEE. The base component paired with the Facet Cover™ (of material matched to the roof) streamlines the installation of solar panels, fall protection systems, HVAC units and other rooftop accessories, providing an efficient and reliable attachment method for single-ply roof installations.

By supporting the commercialization of Facet Mount, S-5! strengthens its position as a one-stop shop for rooftop attachment solutions, meeting the growing demand in the market when metal roofing is not an option. This partnership will enhance S-5!'s product lineup, providing "best in class" solutions for a variety of roofing applications.

Made from high-pressure cast aluminum, Facet Mount features 12 vertical and 4 slanted mounting points for a total of 16 potential attachment points to meet highly engineered specifications. It utilizes a 3/8"-16 bolt attachment to allow max equipment attachment flexibility, Facet Mount boasts shear strengths up to 6,750 lbs., and an uplift resistance up to 12,750 lbs.,—making it a stand-out product in the membrane roof mount market.

"This joint venture represents a significant step forward in our ongoing commitment to delivering world-class engineered products for architects, contractors, installers, EPCs and other trade professionals," said Rob Haddock, CEO of S-5! "Our shared vision for a greener world is fundamental to this collaboration. By combining our expertise in solar technology, green building, and roofing systems, we are poised to deliver innovative products that set the bar for performance, reliability and sustainability."

Haddock continued, "Our customers often ask if we have a mounting solution for their commercial single-ply roof projects. With 35 years as the global leader in metal roofing solutions, S-5! is now positioned to deliver top-tier attachment solutions for roofing systems beyond metal. This partnership will help shape the future of energy-efficient, sustainable construction, with high-performance products that exceed both industry standards and customer expectations."

"After nearly 20 years of utilizing Facet Mount in internal construction projects and over 10 years of successfully selling it within the renewable energy sector, the management team at Sustainable Technologies sought a strategic partnership to further expand our footprint in the roofing industry," said Todd Lindstrom of Sustainable Technologies. "Having worked alongside the S-5! team for many years and admiring their unwavering commitment to excellence, we are excited to join forces and be part of this promising collaboration."

BRAVA MEETS WILDLAND-URBAN INTERFACE (WUI) CODE FOR FIRE-SAFE HOMES

Brava Roof Tile, a manufacturer of high-performance synthetic roofing in the United States, has announced its three product lines, Slate, Cedar Shake, and Spanish Barrel, comply for use as Class A or Class C roof-assemblies, meeting the requirements of the Wildland-Urban Interface (WUI) code. This certification is crucial for homes in wildfire-prone areas, enabling homeowners to meet local building codes while ensuring their properties are protected with fire-resistant materials.

Established in response to the growing threat of wildfires in areas where homes and businesses are built near forests, grasslands, or other flammable vegetation, the Wildland-Urban Interface (WUI) program sets critical building codes and standards designed to enhance the fire resilience of structures in these high-risk areas. As fire seasons have lengthened and become more severe, WUI compliance has become essential for property owners to minimize the risk of fire damage.

With Class A and Class C fire ratings, Brava's synthetic roofing materials provide the highest levels of fire resistance, ensuring homes are protected from embers and extreme heat. Class A provides the highest level of fire resistance, making it ideal for homes facing extreme fire risk (Class 1 zones). Class C ratings, while still effective, offer a lower level of fire resistance and may be suitable for moderate-risk areas. Beyond fire protection, these durable tiles resist impact, mold, and harsh weather, delivering long-lasting performance even in extreme conditions. ●

BY NICK WARRICK,
ALL SEASONS UNIFORMS

WEATHER EXTREMES

CHOOSING THE RIGHT GEAR FOR ROOFING IN EXTREME WEATHER CONDITIONS

Roofing work is risky, especially during extreme weather conditions. In fact, the US Bureau of Labor and Statistics classifies roofing as one of the deadliest professions after hunting and fishing. [https://www.bls.gov/news.release/pdf/cfoi.pdf] Falls from heights and related injuries from working equipment can lead to loss of life, project delays, and unexpected losses.

Proper roofing gear enhances the safety, efficiency, and confidence of workers. Therefore, it's critical for roofing contractors and professionals to equip themselves with the right gear to keep them safe and protected, especially when working under adverse weather conditions.

Read on and learn more about choosing the right roofing gear to ensure safety and compliance in extreme weather.

FERENC-STOCK.ADOBE.COM

UNDERSTANDING THE CHALLENGES OF ROOFING IN EXTREME WEATHER

Extreme weather brings a lot of challenges for roofing contractors and professionals. Adverse conditions like rain, heat, snow, and wind impact the safety of workers. Investing in high-quality gear is essential, and many roofing professionals rely on American-made workwear brands known for their durability and ability to withstand harsh conditions.

Here is a breakdown of specific weather conditions and the challenges they bring.

Extreme Heat

Prolonged exposure to excessive heat can lead to exhaustion of workers and increase the risk of heatstroke. Additionally, long hours under the scorching sun lead to dehydration, reducing the productivity and concentration.

Extreme Cold

Too much cold exposes workers to the risk of hypothermia, especially if their bodies are exposed. Workers may also find it difficult to work with brittle and stiff roofing materials. This reduces their efficiency, making the project more costly.

Heavy Rain and Snow

Besides water damage to the roof structure, heavy rain and snow make the working surface slippery. Consequently, movement on the roof becomes difficult, and workers are prone to fatal falls and injuries. Rain also causes poor visibility, making it hard for workers to identify hazards.

High Winds

Strong winds can blow roofing material or knock a worker over. Winds may even cause damage to existing roofing components, making it difficult for workers to handle and secure materials. This leads to prolonged project completion schedules, work injuries, and increased costs.

KEY FEATURES TO LOOK FOR IN ROOFING GEAR

Choosing the right gear is a major step in ensuring worker safety an legal compliance. [www.osha.gov/aboutosha] Therefore, it's crucial to understand the key features to look for while picking the right gear that will protect your workers against all types of adverse weather.

Here are the key features to look for in roofing gear.

Adaptability to weather conditions: Choose gear according to the weather conditions in your area of operation. If you are working in an area that is cold and snowy, consider gear that has

moisture-wicking material, an insulating layer, and a wool lining to provide warmth.

Safety features: Choose gear that aligns with the industry's safety standards. For roofers, you need to look for a gear that has non-slip materials, harness and attachment points, and high adjustability.

Ease of maintenance and durability: Choosing high-quality gear ensures that you require no replacements throughout the duration of the project. Also choose crease-resistant and stain-resistant gear for ease of maintenance.

WEATHER-SPECIFIC GEAR CONSIDERATIONS

Since equipping workers with the right roofing gear is the first line of defense against workplace hazards, it's crucial to choose apparel in accordance with specific weather conditions.

Here are some weather-specific gear considerations to make when choosing roofing apparel.

Protection Against Hot Sun and Extreme Heat

When working in summer, consider long sleeves and pants that cover large areas of your body. Gear that covers most of your body helps shield you against the scorching sun. Better, look for attire with ultraviolet protection factor (UPF) to protect you from UV radiation.

You should also consider breathable fabrics like cotton to keep you dry in sweaty and humid conditions. Moisture-wicking fabrics like bamboo and polyester are also an excellent choice in hot environments.

Warm Clothes for Cold Environments

If you are working in snowy, windy, and cold environments, choose gear that has layering of high-performance fabric to improve adaptability. Fabrics that have woolen lining provide warmth without bulkiness.

Protection Against Strong Wind

Strong winds can send debris, sand, and loose materials flying. Thus, you need gear that can protect you against abrasion from small, flying debris. Wind can also knock workers over. Choose gear that is flexible but not too loose to mitigate the risk of being knocked around by the wind. Ensure the gear has good layering and air gaps to insulate you from the cold that comes along with the wind.

SAFETY AND COMPLIANCE IN EXTREME WEATHER ROOFING

According to Occupational Health Safety Media, more than 50 roofing workers lose their lives due to work-related injuries every year. [https://ohsonline.com/Articles/2024/02/26/Improving-Roofer-Safety-in-2024.aspx] The statistics underscore the need for roofing professionals to adhere to OSHA's safety guidelines for roofing work as well as local building code.

So, how can you ensure you adhere to safety and compliance guidelines in all your projects, especially during extreme weather?

Monitor the weather: Keep yourself updated on potential hazards like heavy rain, snow, and high winds. Armed with the necessary information, you can plan ahead and come up with robust measures to ensure the safety of your workers.

Invest in proper protective gear: Equip yourself or your workers with the right safety gear according to weather conditions.

Train your staff: Regularly train your workers on the best safety practices at work. The training should involve emergency response and procedures.

Implement fall protection systems: Ensure you install a comprehensive fall protection system, including warning lines system, harnesses, fall arresters, and safety monitoring systems.

Establish work stoppage procedures: Develop clear emergency procedures when weather conditions become extremely unfavorable. [https://www.osha.gov/emergency-preparedness/getting-started] Keep an open line of communication and designate safe retreat areas.

MAINTAINING AND REPLACING ROOFING GEAR FOR MAXIMUM PROTECTION

Roofing gear must be well maintained and replaced when necessary. A compromised gear poses a serious safety hazard. Here are tips to keep your safety apparel in good condition and safe as you work.

- Check your gear daily after work to ensure it's safe and free from any tears or excessive wear.
- Fix small holes and tears immediately after you notice them or before they grow big.
- Clean your gear regularly following the manufacturer's instructions
- Store your apparel in a safe, dry place away from chemicals and direct sunlight

Prioritize replacing your roofing gear when:

- It can no longer function as intended. For instance, a damaged waterproof layer on a jacket can no longer give you the needed protection.
- There are severe tears, holes, and frayed seams
- The gear no longer fits you properly
- They are more than one year old.

FINAL THOUGHT

Roofing is a hazardous job, especially during extreme weather. Heavy rain, extreme heat, snow, and strong winds expose workers to the risk of getting serious injuries or falling sick. Therefore, contractors and roofing professionals must ensure the safety of workers during extreme weather by investing in the proper protective gear. ●

ROOF CHAMPION TO THE RESCUE

TURNING A SETBACK INTO SUCCESS

When a severe hailstorm swept through Columbus, Ohio, John's home took a direct hit. Referred by none other than his own insurance agent—who was worried about industry policy changes— Travis Haessly, principal of Roof Champion of Columbus, and his team arrived to find significant damage covering John's large and complex roof. Initially, John's insurance carrier insisted on using a "roofing marketplace" program that relied on captive contractors to generate repair estimates. The proposal John received was alarmingly low at just over $36,000. Given his background—his father owned an insurance agency, and he himself had served in the CIA and as COO of a major tech corporation—John immediately sensed that something wasn't adding up.

"Armed with Xactimate, a third-party software that calculates local market rates down to each material and labor component, we provided an estimate for the same job that was nearly $20,000 higher," recalls Travis. "Despite multiple attempts to appeal the claim with real-world data and two additional contractor bids, the insurance company refused to adjust. They insisted on using a contractor located over two hours away, which was hardly ideal for prompt service or emergency repairs." Frustrated but undeterred, John hired an independent appraiser. That decision changed everything: the settlement suddenly jumped to over $51,000, a clear indication that the initial offer had been grossly undervalued.

Shortly afterward, the insurance adjuster admitted they were disbanding the flawed roofing marketplace program altogether, even apologizing for the inconvenience. Travis

PROJECT OVERVIEW

INSTALLER:
The Roof Champion Columbus, Columbus, Ohio

SHINGLES:
Owens Corning TruDefinition Duration, Williamsburg, Gray

STARTER STRIPS:
Owens Corning ProEdge, Williamsburg Gray

VENTILATION:
OmniRidge Ridge Vent w/Screen

SEALANT:
MasterSeal NP1

UNDERLAYMENT:
Owens Corning RhinoRoof synthetic underlayment

Carlisle WIP 100 granulated Ice & Water Shield

DRIP EDGE:
ACM Aluminum Drip Edge

OTHER:
Berger Painted Aluminum Trim Coil

Quarrix Smart Plug Roof Patch

Galvanized Steel Base Pipe Flashing

explains, "With the proper settlement finally secured, we installed a stunning Owens Corning Duration Roof in Williamsburg Gray, restoring John's home to its former glory. Beyond the immediate victory, John's experience exposed a troubling industry gap—one that has inspired us to consider developing our own transparent and fair marketplace solution for roofing and restoration jobs." In the end, John's project was about more than just a replacement roof: it was a testament to how perseverance, expertise, and integrity can overcome even the most stubborn insurance obstacles. ●