

RESIDENTIAL METAL ROOFING GUIDE



All across the country, homeowners are ditching their shingle roofs and upgrading to metal! While residential metal roofing isn't new, it is gaining in popularity because more homeowners are recognizing the many environmental and energy-related benefits that metal roofing has to offer.

Homeowners are also growing weary of the never-ending saga of shingle replacement. Whether wind, hail or simply deteriorating from the sun, shingles just don't hold up to the test of time. Metal, on the other hand, offers more resistance to Mother Nature and a decades-long service life. For most people, their new metal roof is the last roof they will ever install.

This eBook was developed to help guide homeowners who have an interest in metal roofing, but are seeking a little more knowledge and understanding before finalizing their decision. If that's your situation, this information is for you. There are some nuances to metal roofing that you should understand before making the investment in your new metal roof system. Style of roof, available substrates (base material), coatings and finding a qualified contractor to install your roof are the most important choices to consider once you've made the decision to switch. All of these considerations will be covered in this eBook.

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WHY METAL ROOFING?

No other popular building material has a shorter service life than shingles. Yet, they’ve been the go-to choice for most homeowners for decades. Chances are high that you went on autopilot and reached out to roofing contractors to get shingle quotes when faced with roof replacement. If hail or weather damage were evident, a call to your insurance company was also in order. Fortunately, this “shingle autopilot replacement syndrome” is waning because homeowners like you are switching to a long-term solution packed with benefits. That solution is metal roofing. Take a look at the chart below to see how a metal roof stacks up against a traditional shingle roof.

	SHINGLE ROOF	METAL ROOF
AESTHETICALLY PLEASING	NO	YES
LONG SERVICE LIFE	NO	YES
LOWER UTILITY EXPENSE	LIMITED	YES
HIGH RECYCLED CONTENT	NO	YES
RECYCLED AFTER SERVICE LIFE	LIMITED	YES
FIRE-RESISTANT	LIMITED	YES
HAIL-RESISTANT	NO	YES
HIGH WIND RESISTANCE	NO	YES



RECYCLABILITY

Metal roofing contains a high percentage of recycled materials, so it could have been a refrigerator or old automobile in its past life. When the service life of a metal roof ends (decades after installation), the material can be recycled again.

While it can be done, recycling shingles is much more difficult than recycling metal, so shingles typically end up in landfills. Many local landfills have more shingles than they care to accept and charge exorbitant fees to discard them. Every year, 11 million tons of shingles are removed from existing projects, and it takes 300 years for them to decompose.

If you’re concerned with preserving the environment for your kids, grandkids, nieces or nephews, metal roofing is the clear choice.

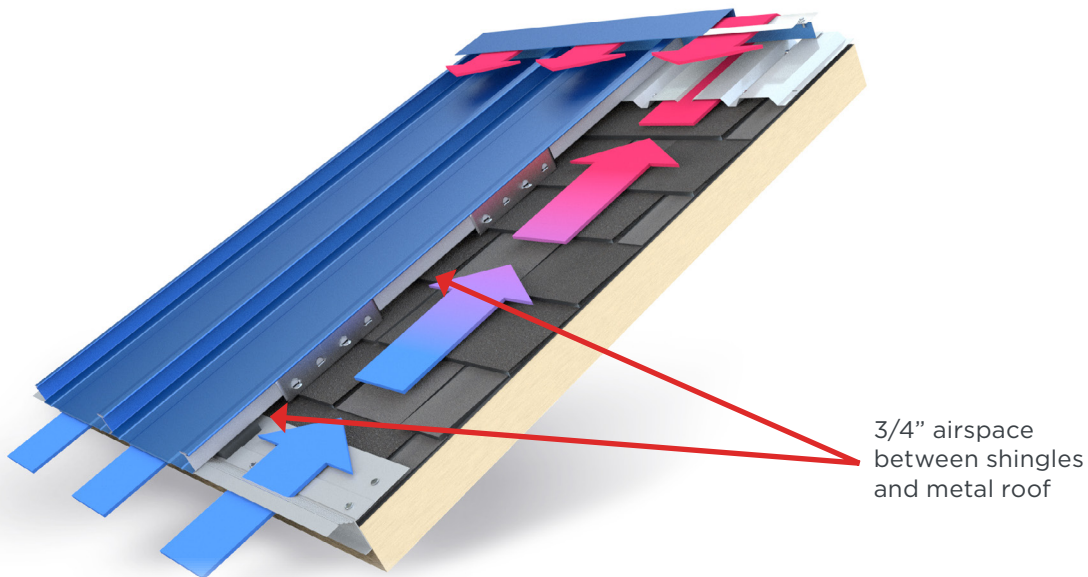


WHY METAL ROOFING?



ENERGY-EFFICIENCY

In addition to being environmentally friendly, metal roofing can save you money on utility bills. According to the Department of Energy, 35% of energy costs for the average building is spent on heating, cooling and ventilation. Above-Sheathing Ventilation (ASV) is a great method to reduce these energy costs. ASV means adding an airspace between the metal roofing and the roofing substrate, which could be anything from a plywood deck to existing conventional shingles. The airspace enables the energy (hot air) to move and vent into the atmosphere, rather than get absorbed into the building structure. Without ASV, all that heat under your roof finds its way to your attic space and eventually the interior of your home. Maximizing ASV reduces your utility load.

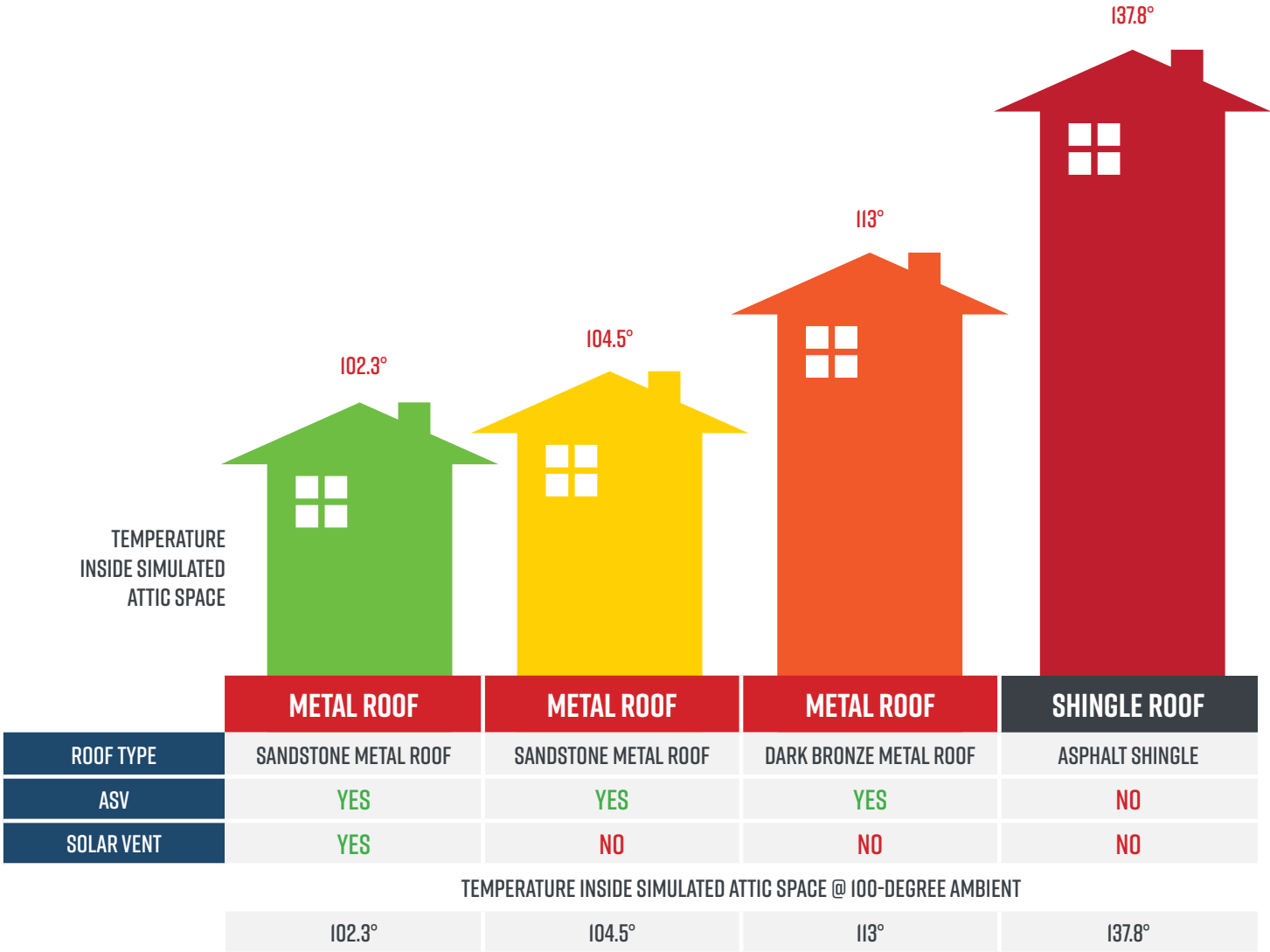


WHY METAL ROOFING?



ENERGY-EFFICIENCY (CONTINUED)

To better understand the benefits of Above-Sheathing Ventilation (ASV), [check out this video](#) comparing attic temperatures of four distinct mockup systems exposed to the summer heat of Houston, Texas. The mockup with ventilated airspace and solar venting has an attic temperature of only a few degrees higher than ambient air compared to the standard shingle roof, which was almost 40 degrees higher. Therefore, adding above-sheathing ventilation when placing new metal over existing shingles is a wise decision.



WHY METAL ROOFING?



LONG SERVICE LIFE

While recyclability and energy-efficiency are two big reasons people are moving to metal roofing, perhaps the biggest reason is its long service life. As mentioned earlier, no other building product has a shorter life expectancy than shingles. While an architectural-style shingle can reasonably be expected to last longer than a basic 3-tab shingle style, neither are expected to last more than 20 years. Metal roofing, on the other hand, can last for 40 to 50 years.

For busy homeowners like you, the idea of buying one metal roof instead of multiple shingle roofs over your lifetime just makes sense. Most are simply tiring of the repetitive cost, hassle and mess every 15 to 20 years to replace their shingle roof. Each year, more and more homeowners are adopting the “one and done” mentality that metal roofing offers.



METAL ROOFING MYTHS

While you may be just beginning to consider metal roofing for your home, it's certainly not a new product. In fact, metal roofing has been around for hundreds of years, but the application has been more common in commercial construction. For homeowners, the common myths of metal roofing often prevent them from making the switch to a superior, low-maintenance product. Let's debunk nine of the most common misconceptions before we get too far into this eBook, so you can read the rest with a truly open mind.



METAL ROOFING IS NOISY WHEN IT RAINS.

If you've ever been in a pole building or garage with a metal roof that didn't have a plywood deck and insulation under it, you likely experienced for yourself why this myth is so prevalent. Without a roof deck, insulation and underlayment, the metal panels can actually intensify the sound and make a light sprinkle sound like a downpour!

It's important to understand that the sound of rain is deadened by the layers of building materials between the metal roof and the living area. The insulation, drywall and wood decking all play a role in deadening the sound of rain. With these building components in place, noise levels are similar to what could be expected with any other roofing material, including shingles.

VERDICT: FALSE!

Still not convinced? [Listen and watch this video.](#)

METAL ROOFING MYTHS

2

METAL ROOFING ATTRACTS HEAT, AND IT WILL INCREASE MY ENERGY COSTS.

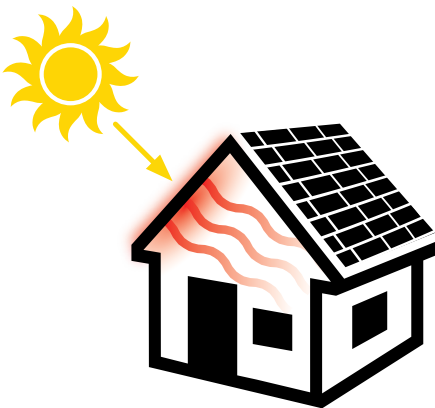
Metal roofing reflects much of the sun's heat and energy, which results in lower (not higher) energy bills. Surprised? Advances in coating technology now enable paint manufacturers to add reflective pigments to coating systems.

Metal roofing panels with these reflective coating systems are referred to as Cool Metal Roofing, and they offer high reflectivity and high thermal emittance. **Reflectivity** measures the amount of energy reflected away from the metal roof panel surface.

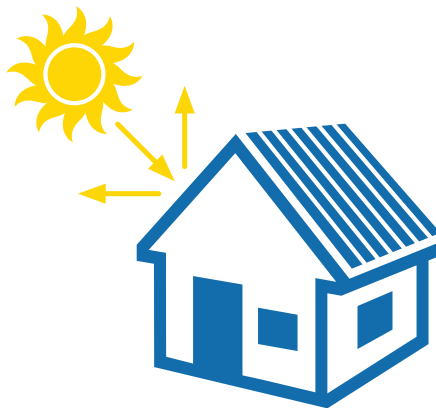
Thermal emittance is the measure of a panel's ability to release heat that it has absorbed. Reflectivity and thermal emittance work together to lower utility costs because less of the sun's energy gets absorbed into the roof system, attic area and living/office space below.

Studies have shown that a cool metal roof can save you as much as 20% in your cooling energy costs. Conventional shingles absorb much more of the sun's energy than metal roofing, and the result is higher air conditioning costs for those homeowners.

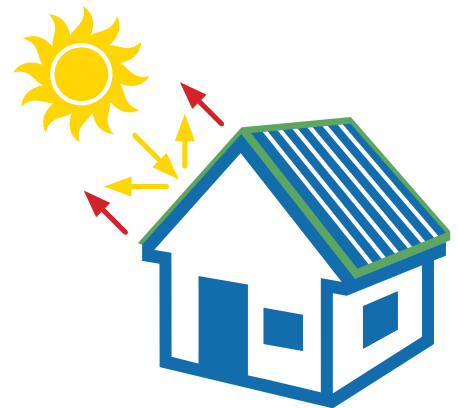
VERDICT: FALSE! IN FACT, THE OPPOSITE IS TRUE!



ENERGY-ABSORBING
ASPHALT ROOF



REFLECTIVE ROOFS
REFLECT SUN'S ENERGY



EMISSIVE ROOFS
RELEASE SUN'S ENERGY

METAL ROOFING MYTHS

3

METAL ROOFING IS UGLY.

Fortunately, this myth is dying out. Simply put, metal roofing is aesthetically pleasing, and it will add curb appeal to almost any home. If you still have doubts about this myth, do an internet search for “residential metal roofing,” and click on the “Images” tab. Your screen will instantly be filled with photos of beautiful metal roof styles and homes! From mansions to modest dwellings, metal roofing is proving to be the homeowner’s choice.

VERDICT: AESTHETICS ARE A PERSONAL PREFERENCE, SO YOU’LL HAVE TO DECIDE THIS ONE FOR YOURSELF. TO US AND MILLIONS OF OTHER HOMEOWNERS, THERE’S NOTHING MORE BEAUTIFUL!

[Check out](#) our Visualizer to see what a metal roof would look like on your home.

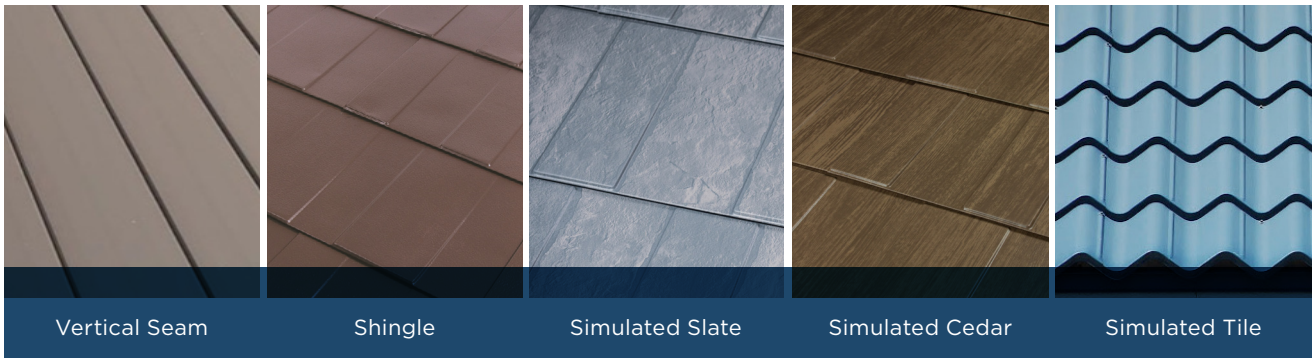


METAL ROOFING MYTHS

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METAL ROOFING WON'T LOOK GOOD ON MY STYLE OF HOME.

With so many metal roofing options available today, any home can look great with a metal roof. In addition to a variety of styles, most manufacturers have a wide selection of available colors. If a vertical seam panel running from eave to ridge (bottom to top) is not right for you, there are metal options that simulate shingles, slate, cedar and tile roofs.



VERDICT: AGAIN, AESTHETICS ARE A PERSONAL PREFERENCE, SO YOU'LL HAVE TO DECIDE IF THIS IS MYTH OR FACT. WITH SO MANY STYLES AND COLORS TO CHOOSE FROM, MOST HOMEOWNERS FIND A LOOK THEY LOVE.



METAL ROOFING MYTHS

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METAL ROOFING WILL ATTRACT LIGHTNING STRIKES.

Many people think that because metal can conduct electricity, lightning will actually be attracted to it. Instead, lightning actually strikes the closest targets. That's why taller buildings and trees are at the greatest risk for a lightning strike. It's also why the Empire State Building is struck by lightning an average of 25 times each year.

Not only is a metal roof no more prone to lightning strikes than any other roofing material, you can take comfort in the fact that metal roofing is non-combustible. In the event there is a lightning strike, a metal roof will not catch fire as other building materials do.

VERDICT: FALSE!

Still not convinced? Check out these facts from the [Lightning Protection Institute](#).

6

METAL ROOFING IS PRONE TO HAIL DAMAGE.

Admittedly, hail is the single biggest cause of residential roof replacement, and we all pay the price for it with higher home insurance premiums. However, you do have some control. Because metal roofing is more hail-resistant than shingles, many insurance companies actually offer a discount on home insurance when metal roofing is used.

This article from the Metal Roofing Alliance addresses the durability of metal roofs: "In studies conducted by the Insurance Institute for Business & Home Safety (IBHS), while all roof types can sustain some cosmetic damage depending on hailstorm severity, metal roofing performed best and was much less likely to puncture as compared to asphalt, withstanding even golf ball-sized hail stones without compromising performance."

[Homes Designed to Take the Hit: Seeking Protection Against Growing Threat of Hailstorm Damage](#)

VERDICT: FALSE!

7

METAL ROOFING IS TOO EXPENSIVE.

While it's never good to generalize, it's fairly safe to say that metal roofing is often more expensive at the time of purchase. With that said, savvy homeowners are starting to realize there's more at stake than just the initial purchase price. With a life expectancy three times greater than shingles, a metal roof can actually cost "less" money over time. Additionally, metal roofs generally require less maintenance than shingle roofs, which are more susceptible to wind, curling and hail damage.

VERDICT: IT DEPENDS IF YOU'RE COMPARING "FIRST" COST OR "FINAL" COST. METAL ROOFING IS OFTEN MORE EXPENSIVE INITIALLY, BUT IT'S TYPICALLY A LESS EXPENSIVE OPTION OVER THE LIFETIME OF THE ROOF.

METAL ROOFING MYTHS

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METAL ROOFING DOES NOT STAND UP TO MOTHER NATURE.

Metal roofing is fire, hail and wind-resistant, and it does a great job of standing toe-to-toe against Mother Nature. There are many real-life examples that showcase how metal withstands these adverse conditions.

- An [ABC Nightly News story](#) about a metal roof surviving a forest fire
- A [New York Times article](#) about a home surviving Hurricane Florence
- After the devastation Hurricane Irma caused in the Florida Keys, there are calls to make [metal roofing mandatory](#) in Monroe County.
- Many insurance companies recognize the benefits of metal and offer discounts for structures with metal roofs.

VERDICT: WHEN IT COMES TO RESISTING NATURE'S ELEMENTS, METAL ROOFING CLEARLY OUTSHINES SHINGLES!



METAL ROOFING MYTHS

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ALL METAL ROOFING IS THE SAME.

It's important for homeowners to have an understanding of the components that make up metal roofing because not all metal panels are created equal. Just like most items you purchase on a daily basis, metal roofing has varying levels of quality and performance. Maybe a more appropriate comparison is conventional shingles. If you have already replaced a shingle roof, you are well aware of varying levels of quality and performance. The same statement holds true for metal roofing: Quality and performance varies based on the quality of the metal substrate and coating (paint) system.

VERDICT: FALSE! IT'S IMPORTANT FOR HOMEOWNERS TO CONSIDER SUBSTRATES, GAUGES AND PAINT SYSTEMS WHEN COMPARING METAL ROOFING OPTIONS.

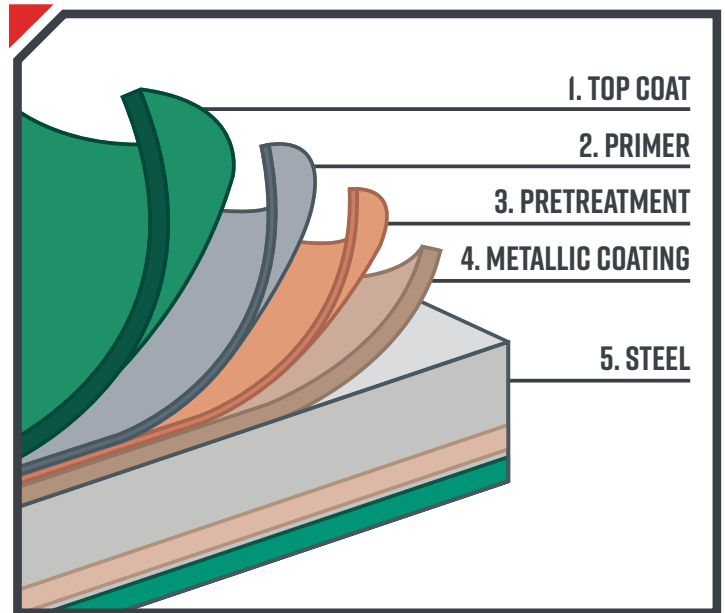
HOPEFULLY, WE DISPELLED THESE NINE POPULAR MYTHS ABOUT RESIDENTIAL METAL ROOFING.

If you are still looking for more evidence regarding the value of metal roofing, check out these [homeowner testimonials](#).

SUBSTRATES

Consumers usually spend more time picking out the “color” for a metal roof than they do thinking about the substrate of the steel. The reality is that the substrate is essential to the life expectancy of metal roofing.

Let’s dig a little deeper into the steel substrate topic. Depending on your needs, the type of substrate you choose is one of the most important items to consider. The most popular steel substrates in the metal roofing industry are Galvanized and Galvalume®. Galvanized substrates are coated in zinc, while Galvalume® substrates are coated with an alloy of zinc plus aluminum. Both Galvalume® and Galvanized are good substrates for metal roofing panels.



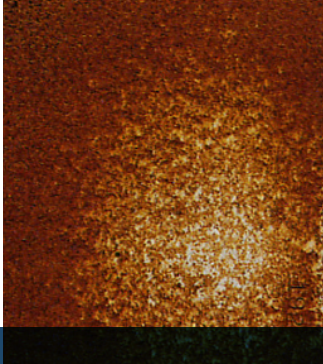
With Galvanized substrates, the greater the amount of zinc, the greater the protection against panel corrosion. Two commonly used Galvanized substrates are designated as G100 and G60. These designations relate to the total amount of zinc contained on both sides of the panel surfaces. G100 contains 1.0 ounce of zinc for every one square foot of panel, while G60 substrates contain 0.6 ounces of zinc. The important fact to consider is that a G100 substrate contains 66% more protective zinc than a G60 substrate. This difference will have a direct correlation to panel longevity and long-term aesthetics of your project. As a result, G60 substrates are simply not appropriate for residential roofing projects. Yet, they are widely available. For the uneducated consumer, it’s an easy mistake to make.

For most applications, Galvalume® substrates offer the best long-term solution, and its superior performance has been proven in the field. Over four decades of testing have shown that Galvalume® delivers greater corrosion resistance compared to Galvanized panels. In fact, the performance of Galvalume® in the construction industry has been so superior that steel mills warranty it against rupture or perforation due to corrosion. Similar warranties simply do not exist for Galvanized substrates.

SUBSTRATES

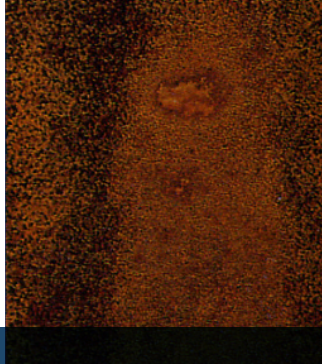
In one test, unpainted Galvalume® and Galvanized panels were placed in four different types of outdoor environments, including a normal marine and a rural setting. The harsher the surroundings, the better Galvalume® performed. After 23 years of side-by-side comparison in all areas, Galvalume® was two to four times more durable than Galvanized.

MODERATE MARINE
GALVANIZED G90

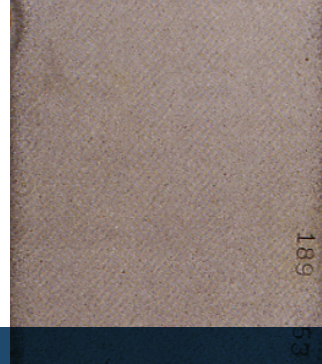


Galvanized (1 mil coating) G90 panels show complete red rust after **18 years** at both marine and rural sites.

RURAL
GALVANIZED G90

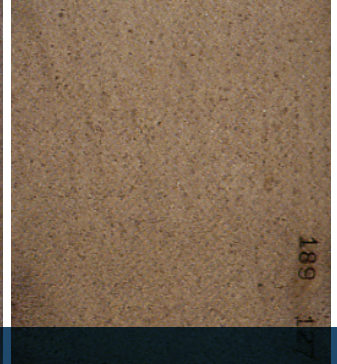


MODERATE MARINE
GALVALUME® SHEET



Galvalume® (1 mil coating) panels continue to perform well in the marine and rural sites after **23 years.**

RURAL
GALVALUME® SHEET



[Download this brochure for more information.](#)

Color is important, but avoid the mistake many homeowners make when shopping for metal roofing. Make sure that the substrate matches your long-term performance expectations. There are a lot of options available in the marketplace, and the wrong substrate selection could result in disappointment and a shorter life expectancy for your new metal roof.

COATINGS

The coating system, or paint, for metal roof panels is just as important as the substrate discussed in the last section. The coating/paint is not only the part of your new metal roof that everyone will see, but it's also a critical part of your overall metal roofing system. For the life of your metal roof (remember that can easily be 40 to 50 years), the coating will be exposed to Mother Nature's elements: ultraviolet sunrays, acid rain, dirt, etc. Over time, these environmental conditions can break down the coating, resulting in what is commonly referred to as panel fade and chalk.

Fade and chalk are not pleasing to the eye, and the degree of fade and chalk is directly related to the coating system. The most popular coatings for metal panels are Polyester, Silicone-Modified Polyester (SMP) and Kynar 500® (PVDF). It's helpful to think of these three paint systems in a Good, Better, Best ranking system.



In that analogy, a Polyester paint system is the lowest with a “Good” ranking. However, Polyester paint systems exhibit the highest amount of chalk and fade, and they should not be selected for residential applications due to its short life expectancy.

SMP (Silicone-Modified Polyesters) represent the “Better” option in our sliding scale. While they perform better than straight Polyesters, they will still exhibit considerable fade and chalk. For the less discerning homeowner or when light colors are selected, this “may” be a viable option because fade and chalk are less visible on lighter shades.

PVDF's (Kynar 500®) paint systems represent the best performance available for today's metal panels, and consequently hold the “Best” position in the scale. Kynar 500® paint systems were developed in the 1960s and quickly became the go-to product for commercial and architectural applications. SMP systems were utilized more for agricultural and industrial applications where performance was not as important. In the late 1990s, Kynar 500® paint became the go-to product for all applications. It offers unmatched performance at a marginally higher price than SMPs.

COATINGS

Still not sure which coating is right for you? Let's look at some examples to help it make more sense. Both Kynar 500® (PVDF) and Silicone-Modified Polyester (SMP) panels were installed on a project in Louisiana. On day one, the colors were an identical shade of green. However, this project included a combination of materials, some with the Kynar 500® paint system and some with the SMP paint system. The photo below, taken only eight years later, tells a powerful story of the differences between the paint systems as it highlights both chalk and fade of the SMP paint system. Note that no fade or chalking on the darker Kynar 500® (PVDF) panels is present during the same eight-year window.



Quality coatings made in the USA by Sherwin-Williams®.

McElroy Metal's paint supplier is Sherwin-Williams®. While McElroy Metal offers Polyester, Silicone-Modified Polyester and PVDF (Kynar 500®), we strongly recommend PVDF coatings for residential applications where long-term aesthetics and performance are important considerations.

SHERWIN-WILLIAMS®
Coil Coatings

COATINGS

Although a commercial application, the next example also dramatically illustrates the superior performance of Kynar 500®. This building was built in two phases, nine years apart. Note that there is no color difference between the original roof and the addition.



With examples like these, it's obvious that Kynar 500® (PVDF) coatings are the “Best” option when long service life, color retention and chalk-resistance are important. Yet, uninformed homeowners still often select a Silicone-Modified Polyester paint system. Why? It's often because not every panel manufacturer or contractor offers Kynar 500® paint as one of their standard products. In those cases, installers may feel forced to sell the product they have available to them and oversell it as “just as good” as Kynar 500®. Plainly put, there is no paint system that is presently equal to or better than Kynar 500®.

Selecting Kynar 500® (PVDF) for your residential roof means a long-lasting “like new” appearance year-after-year versus Silicone-Modified Polyester (SMP) coatings, which can begin to degrade and look aged after only a few years. A metal roof is a big investment in your home. It's important to understand these different types of paint systems, make your selection, and then only work with contractors who are willing to supply the product you select.

In summary, if long-term performance and “like new” appearance are important criteria to you, metal roofs with a Galvalume® substrate and PVDF (Kynar 500®) are your best bet. Don't be afraid to ask potential contractors what substrate and coating they recommend for your project. It could be a red flag if they don't know or try to steer you toward lower-quality substrates and coatings.

WARRANTIES

As indicated previously, it’s vitally important to consider the substrates and coating systems that you’ll use on metal roofing for your home. When the proper products are selected, the warranty of the product is considerably less important (but still important). Surprised? Consumers often associate warranty with dependability and performance. This is not necessarily the case.

Take a look at this example from the automotive industry. Most people would probably agree that an \$84,000 Lexus® GF Sedan offers higher performance than a \$14,000 Hyundai®. If you compare warranties, the Hyundai® offers longer terms for most categories for both time frame and mileage.

WARRANTIES ARE NOT ALWAYS AN INDICATION OF PERFORMANCE.



WARRANTIES VS. PERFORMANCE	HYUNDAI® ACCENT	LEXUS® GS F
PRICE	\$13,995	\$84,450
BASIC WARRANTY	5 YEARS/60,000 MILES	4 YEARS/50,000 MILES
POWERTRAIN	10 YEARS/100,000 MILES	6 YEARS/70,000 MILES
CORROSION PERFORATION	7 YEARS	6 YEARS
ROADSIDE ASSISTANCE	5 YEARS	5 YEARS

WARRANTIES



THE TRUTH ABOUT ROOFING WARRANTIES

Sadly, the automotive industry doesn't have the market cornered on using warranties to sway buyers. Many suppliers in the roofing industry (both shingle and metal) have jumped on the practice. Lifetime warranties, while quite popular, simply don't guarantee acceptable performance for life.

Let's first take a look at shingle warranties. Have you ever seen a shingle last for a lifetime? Of course not. However, major shingle manufacturers still offer lifetime warranties, even though everyone knows that a shingle won't perform for a "lifetime."

In fairness, there are some metal manufacturers who have taken the same approach. The theory is that buyers will see the big heading on a warranty with a number of years and never read the fine print. The reality is that many buyers don't take the time to fully understand warranties. If you're still reading this eBook, we're guessing you're smarter than that.

Just because a warranty has an extended time frame (45 years or even a "lifetime"), it doesn't necessarily mean that the warranty is better or that the product offers better performance. There are some "easy buttons" in life. Warranties simply aren't one of them.

If you're going to factor warranty length into your purchase decision, you should ask for a copy of the warranty and actually read it! With metal panels, here are some of the highpoints you should watch for:

I. LENGTH OF WARRANTY TERM

Be extremely careful with this one. There are many ways for manufacturers to manipulate this information. One of the most common approaches is to prorate the amount of coverage. While the big heading might say "Lifetime" or "45 Years," the fine print and exclusions might reveal that your product may only be warrantied at 20% value within just a few, short years.

WARRANTIES

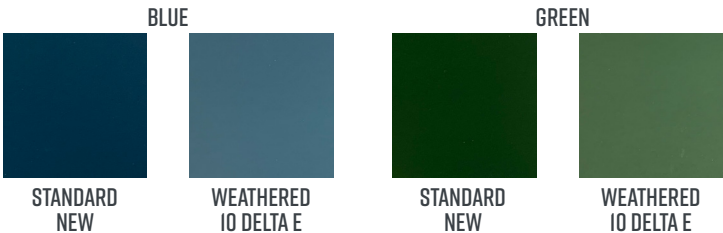


THE TRUTH ABOUT ROOFING WARRANTIES (CONTINUED)

2. FADE/CHALK ALLOWED

The summary table below was developed from prominent metal panel manufacturer warranties. It will help you understand what to watch for with regard to fade and chalk:

- A. Note that the fade and chalk “Warranty Length” is the same for both SMP and Kynar 500®. That practice is actually quite common. If you aren’t paying close attention, this practice leads you to the conclusion that the SMP paint systems must be as good as the Kynar 500® because they both have a 30-year warranty. As we discussed earlier, that’s far from factual, so it’s important to dig a little deeper.
- B. Chalk: When you look at the intersection of the “Chalk” and “Allowed” columns, things begin to make more sense. Keep in mind that in regard to Chalk, 10 is a perfect score of zero chalk, so a higher number is better. As you can see, SMP panels can exhibit 50% chalk on roof applications and still be within the warranty terms. When a Kynar 500® system falls below just 20% chalk for roofing, it would be considered a warrantable situation. Both are warranted for 30 years, but the Kynar 500® warranty is written to much higher standards and tighter requirements as one would expect with the superior paint finish.
- C. Fade: Here’s where things really come into perspective. Keep in mind that for Fade measurements, a lower number is better. In this example, an SMP roof can experience up to 9 Delta E units of fade* before it’s in a warrantable situation. Conversely, Kynar 500® moves to a warranty situation once 5 delta e units of fade occur. Again, both warranty terms are 30 years, but the Kynar 500® paint offers almost twice the protection of the SMP warranty.



*National Coil Coaters Association (NCCA) image showing 5 delta e fade differential. Is this amount of fade acceptable for your home? If not, Kynar 500® coatings are the clear choice.

	SILICONE-MODIFIED POLYESTER (SMP)		KYNAR 500® (PDVF)	
	WARRANTY LENGTH	ALLOWED	WARRANTY LENGTH	ALLOWED
CHALK	30 YEARS	ROOF > 5	30 YEARS	ROOF > 8
FADE	30 YEARS	ROOF > 9	30 YEARS	ROOF > 5

Note: For chalk, higher numbers indicate better performance. For fade, lower numbers indicate better performance.

WARRANTIES



THE TRUTH ABOUT ROOFING WARRANTIES (CONTINUED)

D. It's also important to note that per ASTM (American Society for Testing and Materials) procedures, coating warranties specify that panel surfaces should be cleaned with cheese cloth and detergent before measurements are taken.

DON'T GET TRAPPED BY THE "WARRANTY" GAME.

Do not be blinded by long-life, fine-print warranties that promise far beyond the known performance of either panel or coating, or both. Remember, performance rather than warranty is a better gauge of quality and long-term customer satisfaction. Understand these warranty terms to protect yourself.



FADE Fading occurs when the environment attacks the pigment portion of the coating system. Per ASTM D-2244 Method A, procedures testing for fade occurs after all chalk and surface impurities have been removed using cheesecloth and detergent. The faded area, as shown in the image to the left, represents an acceptable level of failure for Silicone-Modified Polyester (SMP) coatings.



CHALK Chalking occurs when the environment attacks the resin in the coating system. As the resin degrades, it takes on a whitish appearance, called chalk. Shown is an acceptable level of failure for Silicone-Modified Polyester (SMP) coatings.



FILM INTEGRITY Film integrity is the ability of the coating to stay adhered to the metal substrate. Film integrity has little to do with fade and chalk ratings. Therefore, a bright red wall or roof can be a muted pink (or even chalk white), and the film will still be intact. This is an acceptable level of failure for Silicone-Modified Polyester (SMP) coatings.

RECOMMENDATIONS:

1. Read and understand your supplier's warranty.
2. Make purchasing decision based on panel performance, not warranty.
3. For long-term customer satisfaction, use the best combination of substrate and coatings.



As you might guess, if the fade/chalk is "removed," it's rare for numbers to ever exceed the warranty levels. Remember this image? By terms of the warranty, the SMP coating on this project represents an acceptable level of failure. Any claim would be denied.

WARRANTIES



THE TRUTH ABOUT ROOFING WARRANTIES (CONTINUED)

The harsh reality is that warranties (regardless of the industry) are often written to protect the manufacturer rather than the buyer. Consequently, we at McElroy Metal believe that installed performance is a better measure of quality than warranties. As such, we encourage all of our customers and dealers to take warranties with a grain of salt. While they may certainly have a place in the decision-making process, they should never take center-stage for the reasons just discussed.

Remedies, in the event of a warrantable claim, are another “fine print” area that deserves attention. Many manufacturers’ liability is capped at the amount of money the homeowner paid for the material. That is correct, just the material. Other manufacturers have liability limits that include material *and* labor.

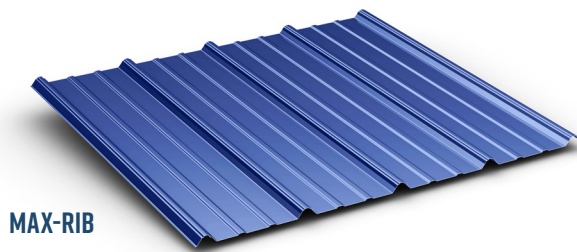
PANEL OPTIONS

While the options may seem overwhelming at first, metal roofing systems are available in two basic types of systems: Exposed Fastener and Concealed Fastener.

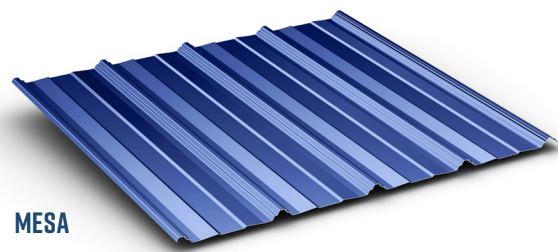
EXPOSED FASTENER PANELS

Exposed fastener panels are the most economical option, and they are typically installed over solid decking (or existing shingles for re-roof applications). They are attached with fasteners that penetrate through the metal panel into the structure below. Fasteners are available in the same color as the panel to make them visually less apparent.

Here are some examples of popular exposed fastener panels:

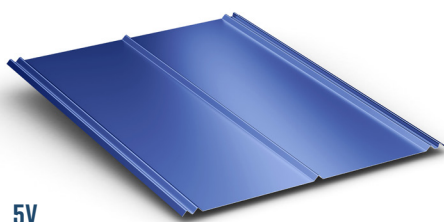


MAX-RIB



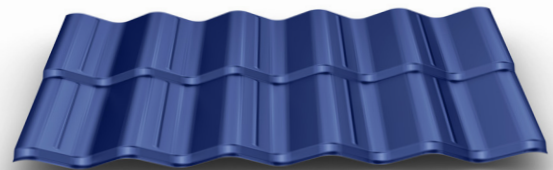
MESA

While panels like our Max-Rib and Mesa panels were initially used in the post-frame building market, they have gained a foothold in the residential roofing market due to the combination of their aesthetics, low price point and long-term performance.



5V

Panels like our 5V offer the more traditional look of standing seam but with exposed fasteners. 5V is especially popular along coastal areas.



MET-TILE

Panels like our Met-Tile are exposed fastener panels that provide the appearance of tile with all the advantages and performance of metal. Installation takes a fraction of the time. In fact, a single Met-Tile panel can cover the equivalent area of 80 individual tiles.

PANEL OPTIONS

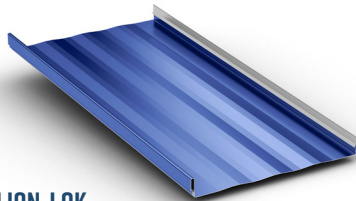
CONCEALED FASTENER PANELS

Concealed fastener panels are considered a step-up from exposed fastener panels, and they are traditionally more expensive. The higher cost stems from both panel manufacturing and increases in the cost of contractor labor. These types of panels cost more for manufacturers to produce, and they also require crating to ensure they arrive in great condition. Additionally, widths of 16" to 18" are common for this family of panels. This narrower width requires installers to handle twice as many panels as the exposed fastener panel options. However, the upside is that there are no exposed fasteners through the panel, which offers greater curb appeal and improved weather-durability.

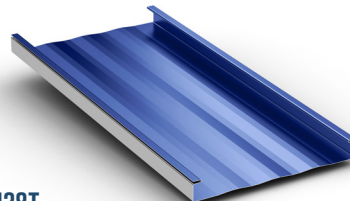
Concealed fastener panels are joined together by integral locking seams that are fastened to the deck with fasteners and/or clips hidden underneath the roofing panels. Concealed fastener panels can either have vertical seams or look like metal shingles. Vertical seam panels with concealed fasteners are referred to as Standing Seam Systems.

As you can see, there are several subcategories within the concealed fastener family, each offering slightly different panel heights and appearances.

Here are some examples of popular concealed fastener panels:

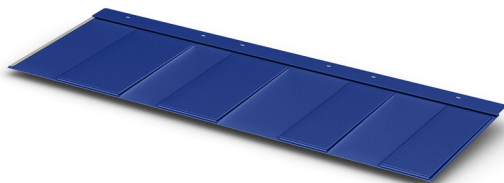


MEDALLION-LOK



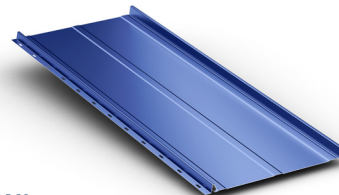
138T

Panels like our Medallion-Lok and 138T are installed with clips that attach directly to the deck. You'll note the very small bends in the flat portion of the panel in the pictures above. These minor bends are referred to as striations, and they are generally offered at no additional cost. Many manufacturers recommend the addition of striations to reduce the appearance of oil canning that can occur with metal panels. Oil canning can make metal panels appear to be wavy instead of lying flat. While not a defect nor cause for rejection, oil canning is aesthetically troublesome to some owners. If oil canning is a concern to you, it should be discussed with your contractor during product selection.



MILAN SHINGLE

Not all concealed fastener systems fall in the standing seam category. Panels like our Milan shingle are quickly finding a foothold with homeowners who desire the long-term advantages of metal but aren't quite ready to give up the appearance of shingles. Metal shingles have tabs that enable the roofing panels to be directly attached to the roof deck. The fasteners and tabs are then concealed by adjoining panels. Milan is also available in simulated slate and cedar shingle profiles.



MERIDIAN

Panels like our Meridian are considered Clipless Standing Seam panels because they simply attach to the roof deck with pancake head fasteners through a slot hidden under the panel. When a standing seam panel is desired, clipless systems like our Meridian are the most economical option.

PANEL OPTIONS

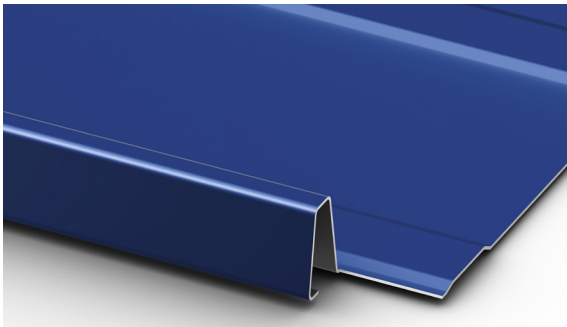
ADDITIONAL PANEL CHOICES

While not every manufacturer offers them across any or all of their product lines, you should also become familiar with two other panel options.

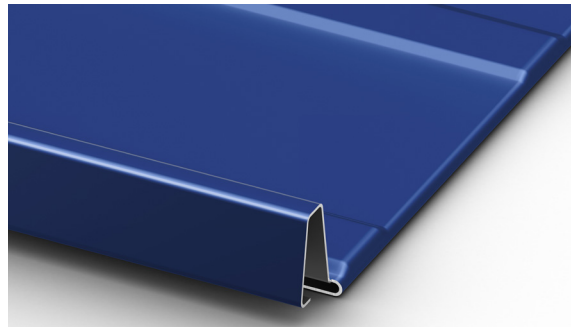
In-Seam Sealant is the term for a small bead of sealant that is injected into one of the upright legs of standing seam panels during production. Some, but not all, manufacturers add an extra charge for this sealant. These sealants can offer a secondary layer of defense if water were to penetrate the vertical leg of the panel.

Additionally, some manufacturers offer panels with factory-formed eave notching like the ones shown below. There are different ways to treat common edge conditions, such as ridges, gables and eaves with metal roofing. If an “architectural” or concealed trim detail is used, there are no fasteners exposed on the trim or the panel. In these situations, it is common for the installer to notch the panel at the eave and fold it over the eave trim. While many contractors make this modification by hand in the field, some manufacturers offer “eave notching” to automate the process. When available, eave notching can save your contractor time and provide a cleaner, more professional eave detail for those applications where an architectural/concealed fastener trim detail is desired.

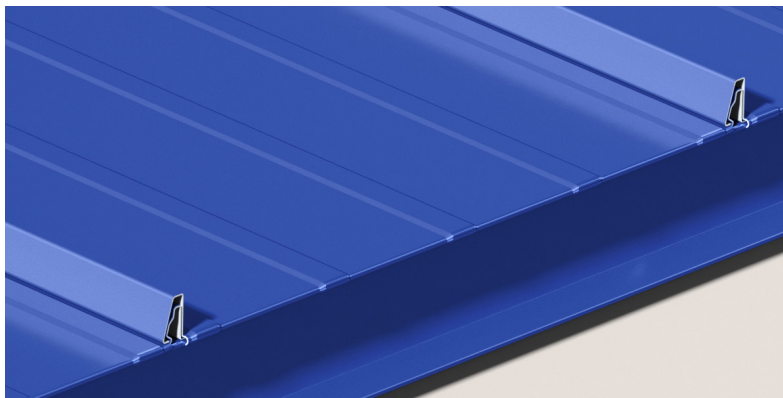
Factory-Formed Eave notch reduces jobsite labor and improves curb appeal.



STEP 1: FACTORY-FORMED EAVE NOTCH



STEP 2: EAVE NOTCH FOLDED UNDER EAVE TRIM ON THE JOBSITE



STEP 3: FACTORY EAVE NOTCH CREATES A CRISP, AESTHETICALLY PLEASING APPEARANCE ALONG THE EDGE OF THE ROOF.

CONTRACTOR SELECTION

If you're intrigued by all the benefits that metal roofing offers, the next step is to identify qualified contractors in your area who specialize in metal roofing. As you might guess, contractors that only "dabble" or occasionally install metal roofing often steer homeowners toward shingles because it's their comfort zone. Do not let their comfort zone push you to accept a shorter-term solution for one of the biggest investments you have, your home.

If you're having trouble finding contractors with experience in metal roofing, you might check out the [**"Find a Contractor"**](#) feature on our website. Simply enter your zip code, adjust the desired distance range, and select "Residential Roofing" from the drop-down menu on the right side. You'll find a list of installers in your area who have experience with metal roofing projects. Not all of our customers choose to be listed on our website, so please contact us if your search comes up empty.

CHECK THEM OUT FIRST.

These next steps are critical. Before picking up the phone or sending an email to request an estimate, take the time to check out the contractor a bit.

1. ASK AROUND.

- A.** Ask family and friends about their recent projects and who they would recommend.

2. REVIEW CONTRACTOR WEBSITES.

- A.** Look for things like customer testimonials and types of products offered.
- B.** If you can find any content on substrates and paint systems, give it a read.
- C.** If they happen to list any vendors on their website, check out those websites, too.
- D.** If they blog, take the time to read several blogs, and decide if they seem like a reputable company you'd like to work with.
- E.** Look to see if there are names of owners/team members on the website.

3. SEARCH THE INTERNET.

- A.** While you're online, do some general investigative work.
- B.** In most cases, it's as simple as doing an internet search for "reviews for XYZ Roofing in city, state" and hitting go.
- C.** You may find plenty of positive things, which is great, but also be on the lookout for negative experiences reported to agencies like the Better Business Bureau.

CONTRACTOR SELECTION

THEN, MAKE THE CALL.

After you've done your research and identified your top two or three contenders, it's finally time to make the call. When you reach out, ask about their experience, product recommendations and process to get a metal roofing estimate. While you're certainly not limited, below are a few questions to help as you begin your conversations with contractors:

- How long have you been installing residential metal roofing?
- How many different metal roofing projects have you completed?
- What different types of systems have you used?
- Which system is your preferred one, and why?
- What substrate do you use?
- What paint system do you use for residential metal roof projects, and why?
- What training has your crew had for residential metal roofing?
- What warranty can I expect on both the product and the installation?
- If I have a warranty claim, does it include labor or just product replacement?
- Could you give me a list of references where you've completed residential metal roofing?

METAL CONSTRUCTION ASSOCIATION (MCA) CERTIFIED PRODUCTS

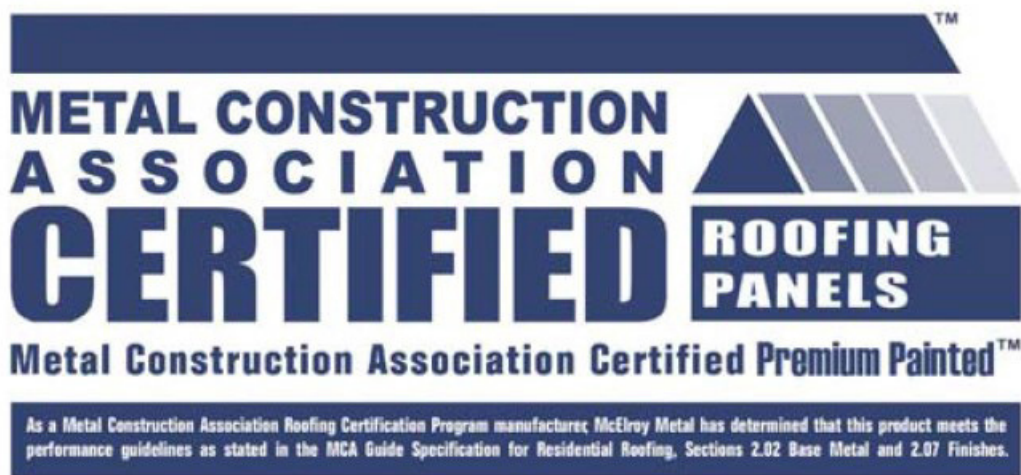
While contractor selection is critical to a good residential metal roofing installation, it's also important to ensure you're receiving certified products. The UL Label and the Good Housekeeping Seal of Approval are intended to give consumers a level of confidence in the products they choose.

The Metal Construction Association (MCA) is an organization of manufacturers and suppliers whose metal products are used in structures throughout the world. Since it was formed in 1983, the MCA has focused on promoting the use of metal in the building industry through marketing and education. The MCA also developed a Metal Roofing Certification program to assist homeowners and professionals in choosing the right metal roof based on their needs.

The MCA Roofing Certification is based on industry standards published in the Guide Specification for Residential Metal Roofing. This program offers certification in the categories of both substrates and coatings.

Roofing products that meet the MCA Metal Roofing Certification criteria may be promoted as "Metal Construction Association Certified Premium Painted™," "Metal Construction Association Certified Standard Painted™" or "Metal Construction Association Certified Natural™."

Look for this label on bundle packaging. This Certified Premium Painted label is your assurance that your roof panels are coated with a high-quality Kynar 500® (PVDF) coating.



SUMMARY

Thanks for hanging with us to the end! If you've read this far, chances are that you too might be growing weary of the constant churn of shingle replacement on your home.

In this eBook, we explored just some of the reasons why metal roofing is growing in popularity. From recyclability to energy-efficiency and long service life, the product is starting to make too much sense for homeowners like you to ignore.

Are you ready to switch to a metal roof so that your next roof might just be your last? If so, [contact us](#) and let us know how we can help make your next roof the last roof you will ever need.

