



**Subtle.
Refined.
Revolutionary.**

**Natural Matte® PVDF is the ultimate low-gloss
metal roofing solution for your community.**



Metal Roofing and Natural Matte PVDF Homeowner Association (HOA) Guide



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Resetting Homeowner Association (HOA) and Architectural Review Board (ARB) Perceptions of Metal Roofing



Introduction

HOAs can be concerned with the installation of metal roofing in their community or planning area. The underlying reasons for these concerns can be valid. These associations want to promote a cohesive community, uphold community safety, and ensure that buildings integrate with their broader environment.

Today's modern metal roofing has advanced considerably, and concerns surrounding metal are broadly unfounded. This guide explores the outdated assumptions associated with metal roofing and provides an overview of a revolutionary finish that can optimize metal roofing integration in your community.

Included in this Resource Pack:

- Overview of modern metal roofing & benefits
- Myth-busting common metal roofing fallacies
- Overview of Natural Matte® PVDF, an ultra-low-gloss finish that enhances community integration
- Outline of performance criteria to evaluate roofing

Did You Know?

- Metal roofing typically lasts 2-3x that of asphalt shingles.
- Metal roofing is one of the fastest growing roof types, growing from 3.4% in 1998 to over 14% in 2016.
- Metal roofing can be selected to lower premiums with insurance providers, such as State Farm.



Modern Metal Roofing Overview

Metal roofing has come a long way from its roots as an agricultural and commercial cladding product. It is worth re-setting perceptions to evaluate metal based on its range of modern benefits.

Not Your Ancestors "Tin Roof" - A common outdated term for metal roofing is the term "tin" roof. This term referred to the old manufacturing approach of coating iron with the chemical element tin to provide product longevity. This coating produced a shiny, silver surface and was only available in commercial panel designs such as corrugated. Today's metal roofing no longer uses a tin coating but a coating of zinc and aluminum over a steel substrate. Advanced aluminum-zinc coatings such as Galvalume® or ZINCALUME® provide long-lasting peace of mind for homeowners with corrosion warranties of 25 years. Field studies on this coating have shown that these products can have an installed lifespan of more than 50 years without any performance compromise.

Exceptional Durability - In most applications, a paint layer is applied on top of the metallic coating to provide aesthetic appeal and to extend product performance. Unlike other exterior paints that are applied in the field and need periodic reapplication, metal is painted in a controlled factory environment before it is formed. This application process provides superior color consistency and significantly extends long-term performance. Modern paint systems provide a range of finish options and offer excellent durability and carry warranties of up to 40 years.

Broad Design Flexibility - The product styles available to homeowners and the architect community have also expanded significantly. Metal roofing panel profiles can offer an elegant aesthetic to match any home style. This is a far cry from the perception that metal only suits commercial or agricultural applications. Today, the most prolific residential metal roofing type is standing seam, which provides a clean look with uniform crisp lines from the raised seam. Standing seam roofing is a concealed fastener type roofing system, which means there are no unsightly visible attachments on the roof surface, and this design improves weatherability and product lifespan.



The Advantages of Modern Metal Roofing



Long Product Lifespans - Metal roofing typically outlasts other roofing materials such as asphalt shingles by 2-3 times.

Color Options for Any Location – Modern paint systems offer options for any location or weather environment.

Appearance Won't Degrade Over Time - Metal roofing warrants against color fade and paint peeling or flaking (called film integrity). This ensures the roof will continue to look good for decades and won't succumb to issues such as staining, varied discoloration, or loss of individual pieces. These failures can be prevalent in other roofing types in just a few years.



Resistance to Organic Material – Metal features a smooth, consistent surface that effectively sheds and prevents the buildup of organic material like mold, dirt, and moss.

Easy to Maintain – Periodic rinsing with fresh water is all a metal roof needs to stay in optimum shape.

Strong resistance to extreme storms - Metal roofing is very resistant to extreme weather conditions such as wind and hail. Metal roofs are class 4 impact resistant, the highest tested resistance to impact damage. Many metal roofing products exceed extreme wind uplift, air infiltration, and water infiltration tests. This performance may be necessary for hurricane-prone areas such as Florida.



Contributes to a Fire-Resistant Structure - Metal Roofing is a non-combustible material, which means when used in conjunction with the appropriate insulation, underlayment, and roof deck material, it can achieve a Class A fire rating (highest rating).

The Advantages of Modern Metal Roofing (Continued)



Non-Porous Material – Metal is a non-porous material and can withstand freeze and thaw cycles without damage, degradation, or deformation, making it ideal for snowy environments.

Unprecedented Input Quality Control – When sourced from reputable suppliers, each batch of painted metal is tested for color correctness, consistent paint thickness, appropriate curing, impact resistance, formability, color vibrancy, and gloss.



Proven Aged Performance – Metal paint systems must also meet extensive testing requirements that demonstrate long-term performance. Long-term testing includes salt spray tests, humidity tests, and UV tests.

Recyclability – A big issue in the building products sector is waste destined for landfill once a product reaches end-of-life. Fortunately, metal is 100% recyclable and easily reused without a degradation in quality. Since metal is so recyclable, new metal products consist of 25-75% of recycled material.



Reduce Power Consumption – Metal roofing with "cool" pigments is highly effective at reflecting the sun's radiation. Cool pigments reduce the heat trapped inside a structure, lowering building cooling costs by up to 25%.

Performance Does Not Degrade - Metal does not degrade in aspects such as reflectivity or fire resistance. Some roofing types can dry out or degrade like wood or petroleum-based products.

Myth Busting Metal Roofing – Common Myths Explained

Metal has changed drastically over time, however several of the historical perceptions of metal remain. Today these are nothing but myths and misconceptions and should not prevent a homeowner from selecting a metal roof. Several of the debunked myths include:

Metal Roofing is Noisy – This misconception stems from the historical experience of taking shelter in an agricultural metal barn or shed during a rainstorm. In these applications, the metal is installed over open rafters and does not feature a roof deck, enabling the noise to reverberate. By comparison a modern residential metal roof is installed over underlayment and a solid roof deck, reducing this reverberation. Insulation and interior drywall can further limit any noticeable sound.

Metal Roofs Attract Lightning – Metal roofing is proven not to attract lightning any different from other roofing materials. Lightning strikes the path of least resistance to the ground. A roof surface is not grounded and not the fastest point to the ground, and as a result, it is not a surface that lightning seeks to follow.

Metal Dents Easily – Many metal products carry a type 4 impact resistance, the highest impact rating, and may be more hail damage resistant than tile or asphalt alternatives.

A Metal Roof Will Rust – Metal is coated with metallic coatings and robust paint systems to provide long-lasting protection from corrosion. In modern architecture, rusted metal is a design choice only, with products such as Corten or painted rust finishes used for roofing or siding.

A Metal Roof Makes the Home Hot - Homes with metal roofs are often cooler in warm environments due to metal's superior reflectivity. Metal roofing featuring cool paint technology can reduce energy cooling costs by up to 25%.



Natural Matte® PVDF Offers Ultimate Community Integration

A common HOA concern with metal is the visible shine or the unwanted glare created by the reflection of sunlight. Visible shine can be a reason to reject metal due to the contrast between the roof surface and the surrounding environment.

A Revolutionary Metal Roof Solution

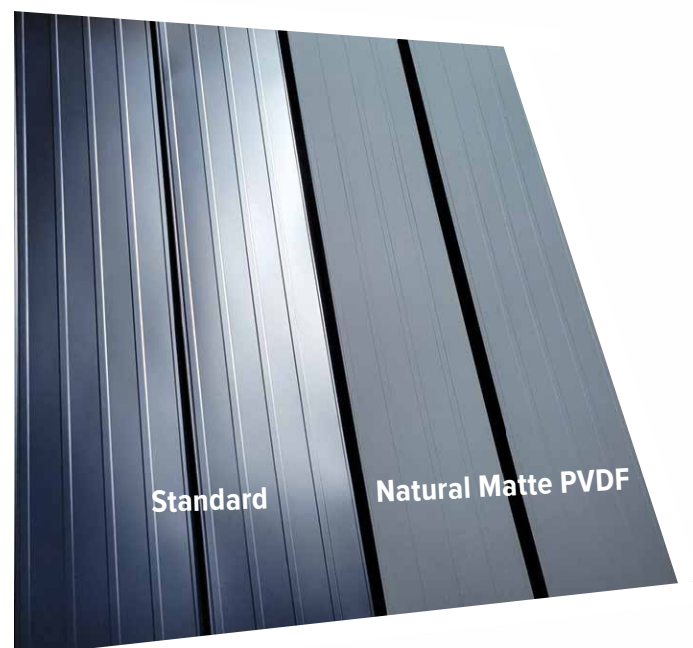
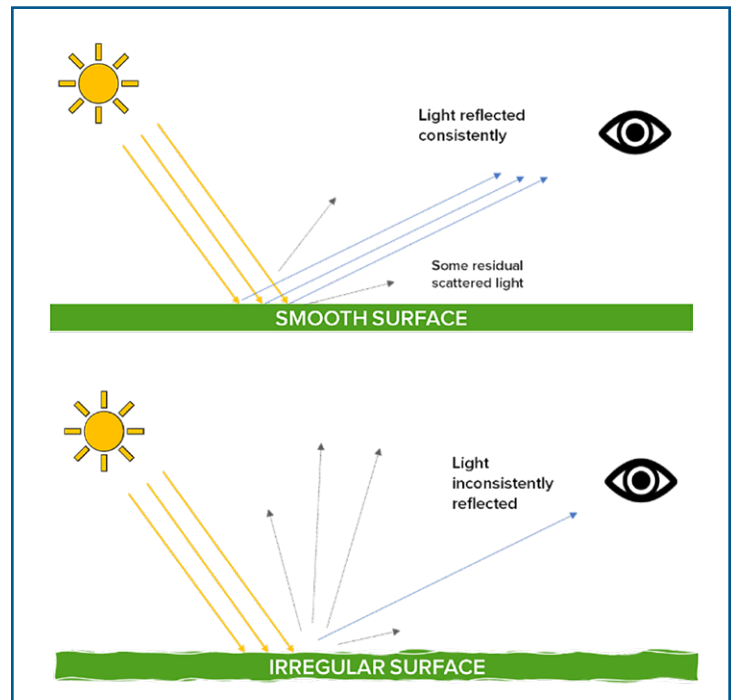
Natural Matte PVDF is a homeowner and community delight by offering a finish that isn't shiny. Natural Matte PVDF features advanced paint technology that eliminates unwanted shine and glare through its light disruptive surface. This unique surface finish sets a new benchmark for ultra-low gloss metal without compromising durability or color. The product range is available in six versatile colors, making it ideal for any residential community.

Inspired by nature, Natural Matte PVDF seeks to capture organic light to create a product that can integrate into any building or community design.

So How is Natural Matte PVDF Different?

Surfaces can provide two distinct types of reflection, specular reflection (mirror-like reflection) or diffuse reflection (the scattered reflection of light). Smooth surfaces reflect light in a consistent direction, intensifying light reflection to create shine. Irregular and varied surfaces do not reflect light in a consistent direction.

Natural Matte PVDF features innovative paint chemistry that dissipates light. This unique technology differs from other low-gloss metals as it avoids the addition of particulates or flatteners. These alternative approaches can create washed-out color or reduce product performance while failing to achieve gloss levels comparable to Natural Matte PVDF.



Know the Facts - Which Numbers to Use When Reviewing Materials?

To Measure Shine, Use Gloss Units (GU)

The shine of a surface can be influenced by several elements, including chemical composition, translucency, cleanliness, and surface texture. Two important metrics, gloss and sheen, measure shine. Both gloss and sheen are measured based on striking a surface with a known quantity of light and observing the amount of light reflected at a specific viewing angle. Gloss is observed based on the reflection of the light source at a 60-degree angle. Sheen uses the same process observed at an 85-degree angle. Gloss and sheen can be measured using the scientific scale, Gloss Units (GU). GU is a 0-100 scale, with the lower end (0 GU) indicating a perfectly matte surface and the higher end (100 GU) based on a standard of polished black glass. Highly reflective surfaces, such as a mirror, can exceed 100 GU.

Other Useful Metrics Unrelated to Shine

It is important to understand the correct metrics in which to assess shine. Light Reflectance Value (LRV) and Solar Reflectance Index (SRI) do not provide accurate assessments of shine. Despite this, they are commonly misquoted in planning rules and HOA provisions when trying to avoid shiny products.

Light Reflectance Value (LRV) estimates how light or dark a color will appear. Zero represents an absolute, all-absorbing black and 100% refers to a pure reflective white. This value is often used to help designers and homeowners select hues within a color range and can be used for grouping and comparing colors. LRV can be an effective tool when reviewing digital color samples. LRV does not assess shine. For example, a glossy black and a matte black will have similar LRV values of less than 10.

The Solar Reflectance Index (SRI) is the most widely used metric to assess the effectiveness of a surface at reflecting or absorbing heat. The light which creates heat, infrared light, is invisible and does not impact shine. The SRI represents a range of 0-100, with 100 being the most efficient. Lighter colors will typically have higher solar reflective values. Many planning codes will have minimum SRI aged values - the 3-year aged performance of the coating. An advantage of metal is that the aged SRI value is generally the same as the initial and does not deteriorate over time.

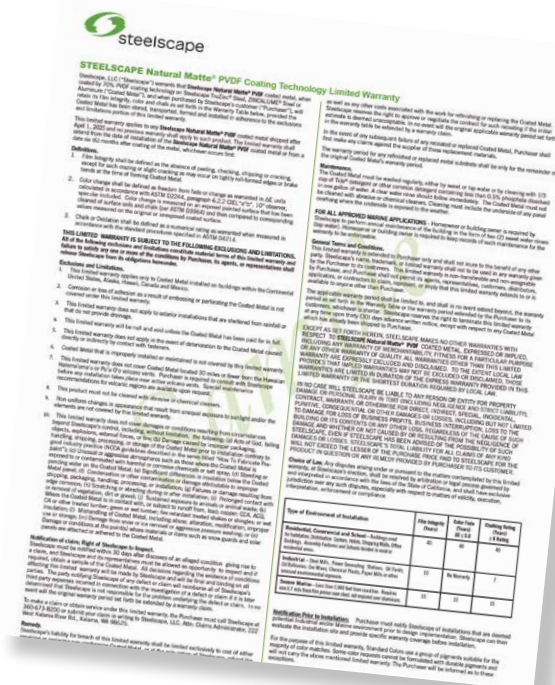


Long Term Performance Guaranteed with Natural Matte PVDF

An outdated HOA concern is that the color of a metal roofing may fade, or the painted surface may peel, creating an unsightly visual appearance. Finish degradation is not a valid concern for modern metal paint systems, including Natural Matte PVDF.

Natural Matte PVDF offers outstanding painted finish performance, corrosion resistance, and color stability. This is an ideal finish for architectural, residential, and commercial projects.

These finishes also offer a 40-year film integrity, color fade and chalking warranty. Due to its robust fluorocarbon technology, the warranty also offers coverage for extreme environments, including industrial and severe marine environments.



By choosing Natural Matte® PVDF, homeowners gain confidence in a finish that not only enhances curb appeal, but preserves value and performance for years to come.

The Natural Matte PVDF difference is clear, a subtle appearance with outstanding durability.

Standard

Natural Matte PVDF



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