

The Frequently Asked Questions (FAQ) section outlines a number of commonly asked questions on painted metal products including metal roofs, metal siding and similar construction products. For your convenience these are arranged by topic.

METAL ROOF FREQUENTLY ASKED QUESTIONS

What is a metal roof?

A metal roof consists of individual metal panels (often called profiles) that are attached to the uppermost surface of a structure to provide protection from environmental elements and to add aesthetic appeal. These panels are lapped, seamed or otherwise attached together to provide a weather resistant seal to outside elements. Metal roofs can come in a variety of shapes and types and are available in an endless array of colors. They are typically roll-formed or stamped to create their shape. Individual panel width, material thickness, paint type, attachment method and panel performance are all factors that may impact the cost of a metal roof product.

What are the different types of metal roofs?

Metal roofs can be categorized into three broad types, concealed fastener roof panels (often called standing seam roofing), exposed fastener panels (such as corrugated profiles and agricultural style panels) and individual metal tiles (often designed to recreate traditional roofing products such as shingles, tiles and slate). The main difference between standing seam roofing and exposed fastener roofing is that the fastener is concealed during the installation of the roof, resulting in a cleaner look and superior weather tightness. Both concealed and exposed fastener roofs are made specific to the requirements of the building, where as metal tiles are more modular and produced in standard sizes. Each of the three different types have their own installed visual appearance, advantages and disadvantages, performance differences and installed cost. Please see the Steelscape Metal Roof Buyer's guide for more information.

What are the advantages of a metal roof?

Metal roofs offer several advantages over other building products. Metal is pre-painted prior to forming into a finished product, this means that metal is available in an endless array of colors and finishes and that this paint is applied in a tightly controlled process which means excellent quality and long product lifespans. Metal is highly durable, available in a range of sizes and shapes, is highly recyclable, energy efficient and lightweight. In fact metal can help reduce energy bills by up to 40% during summer. Furthermore, certain metal products offer superior performance against the elements such as wind, storms and fire and can offer higher home resale value. See the Steelscape Metal Roof Buyer's guide for more information on the advantages of metal roofs.

Is metal better than asphalt shingles?

Metal has a number of advantages over asphalt shingles including superior longevity, energy efficiency, recyclability, and strength against severe environmental conditions. Metal is more complex to install and requires more expertise, resulting in a higher installed or upfront cost and the need for a more skilled contractor compared to asphalt. However a metal roof can last 2-3 times longer than a asphalt roof. Metal also offers a different aesthetic appearance to traditional shingles.

Is metal better than tiles?

Both metal and tile roofs are designed to last for decades. Each provide their own distinctive aesthetic and this is often the key driver of product selection. In certain environmental conditions the brittleness of tile compared to metal may result in chipping or cracking and tiles may attract moss or residue build up. Metal roofs are more complex to install compared to tile and may have a higher installed price. Clay or concrete tiles are significantly heavier compared to metal and this may be a consideration in the design and engineering of the structure.

What is a metal roofs impact on the environment?

Metal is a highly environmentally friendly product. Metal roofing can consist of up to 50-75% recycled material and once a metal product reaches the end of its lifespan, it is 100% recyclable. Furthermore, modern metal products employ 'cool' roof pigments, that is technology which reflects heat, lowering building cooling costs by up to 40% in summer. A metal roof has a longer lifespan compared to many other roofing products which also means less energy consumed in the production and recycling of materials. Finally the metal painting process is a closed loop system which means that harmful Volatile Organic Compounds are trapped and burnt in the manufacturing process.

How are metal roofs attached to the house?

Metal products can be attached to a roof in a number of different ways. Typically, a metal profile is attached to a solid deck, such as OSB or plywood using woodscrews, with trim and flashings attached using stitch screws. However different metal products will have different attachment processes, consult the manufacturer of the specific metal product for more detailed fastener information. Steelscape can provide guidance on reputable end product manufacturers by request.

What is the difference between exposed fastened and concealed fastened roofs?

These reflect the two main categories of metal roofs and reflect a difference in the way these products are installed. Concealed Fastened roofs, often called standing seam roofs are attached to the base roof deck with screws or clips which are then covered up by the next lapped panel. This creates a clean aesthetic and a superior weather-tight seal. For exposed fastener products, the roof is attached to the structure by drilling fasteners through the metal profile. While these type of products use gaskets and sealants to seal these fastener points, they are exposed to degradation and may not provide as tighter seal over time. This type of panel does not allow for thermal movement- that is the expansion and contraction of a profile with changes in temperature, which is why these are not installed in long lengths. Concealed fastener profiles allow for this through the use of floating clips. Exposed fastener profiles are cheaper to manufacture, transport and install.

Will a metal roof grow mold?

The combination of paint chemistry and the smooth flat surfaces of metal roofing make it difficult for debris to attach to a metal roof and for the metal to absorb moisture creating an environment for mold. However each installed environment is unique. To guarantee the clean, stain free appearance of a metal roof, regularly clean a metal roof.

How long will a metal roof last?

The longevity of the metal roof will depend on a number of factors including the type of profile, corrosion resistant metal coating, paint system, quality of the install, maintenance schedule and the installation environment. However most metal roofs can last 50 years or more.

Can a metal roof be installed near the ocean?

Metal can be installed in severe marine environments and coastal environments, but may requires an upgraded paint system to provide the required additional corrosion resistance. Severe marine paint systems typically include a high build primer and an additional layer of clear coat over the top to provide additional protection. The needs of these particular systems will depend on the unique environment and the proximity to salt water – Steelscape can provide guidance on recommendations for your specific install.

Is a metal roof right for my house?

Metal is available in a range of shapes and designs to complement all housing styles and has a range of performance rated products to suit certain installation environments. Metal is also available in a wide range of color and finish options to provide complementary hues for your dream home. Overall the suitability of a metal roof will depend on a number of factors. These include the project budget for a roof, the type of roof to be installed, the desired end aesthetic and other environmental factors such as HOA restrictions. For more information on metal roof tips, please see the Steelscape Metal Roof Buyer's Guide.

What is the Solar Reflectance Index (SRI)?

Solar Reflectance Index is the most common index used to measure the reflectivity effectiveness of a color for a metal roof or wall. The consolidated value is calculated from solar reflectance and emissivity with factors such as air flow considered. The higher the value the greater the reflectance. This is expressed as a range so that a standard black surface has an initial SRI of 0, where as a standard white surface has an initial SRI of 100. Green building programs such as LEED often specify minimum SRI values to improve the energy efficiency of structures. Bright colors such as whites, light tans, light silvers and bare products such as ZINCALUME® plus offer superior SRI values although advances in paint technology, specifically 'cool' pigment technology enable the creation of highly reflective pigments in darker colors.

What is Light Reflective Value (LRV)?

Light Reflectance Value (LRV) the amount of visible or usable light that reflects from a surface. LRV is expressed as a percentage from 0 to 100; the higher the number the more visible light that is reflected. This reference is used for both metal roofs and metal walls. This value is often used for metal roofs to help compare colors and assess how reflective or bright a color will appear once installed and how this color will integrate with its surrounding environment. In general, a blacks and dark colors will have low LRVs, where as white will have a very high LRV. Maximum LRV values may be specified by certain HOA or city planning provisions.

How can I reduce the gloss or sheen of my metal roof?

A common property of painted metal finishes compared to other surfaces such as tile and shingles, is that they are smooth and reflective. This can lead to a higher gloss and sheen (shininess caused by sunlight) compared to other materials. In some applications homeowners or building designers may seek to reduce gloss and sheen, such as if there are restrictive Homeowner Association provisions. To reduce these effects there are two common approaches – textured paint systems and low gloss paint system, often called matte paint systems. Textured paint systems use paint chemistry that cures to create a non-uniform surface texture to dissipate light. Matte paint systems use specialty developed micro-wrinkle paint technology which provides a smoother satin finish. For more information on the color options available see the Steelscape Color and Inspiration Guides.

Will my metal roof fade?

If the right paint system is selected for its installed environment, metal paint systems can resist color fade for more than 30 years. The rate of fade and if this fade is covered by a product warranty will depend on the paint system selected, the color selected, the installation environment and if other options such as additional clear coat layers are selected. Premium paint systems such as Polyvinylidene Fluoride (PVDF) systems will offer the greatest resistance and longest warranties against color fade. Also note that bright colors will fade faster compared to duller colors due to the basis of their pigments. An additional protective layer such as a clear coat can also extend color longevity but will add additional product cost. For more color information please see the Steelscape Learning Center.

What is oil canning?

Oil canning is a visual phenomenon seen as waviness or distortions in the flat surfaces of metal roofing and metal siding products. This effect is created by a range of different factors including stresses in the base material, improper fastener pressure, misaligned panels, and thermal expansion. Selecting a roof product with striations (minor raised accent lines) and thicker materials may reduce these effects. Selecting a reputable installer and preparing the roof surface adequately for installation are also critical.

What is the best color for my metal roof?

There is no one 'best' color for a metal roof, in fact an advantage of metal over other materials are the wide range of color options available to homeowners and the design community. Colors can vary from bright solids, to neutral whites, to sparkling metallics, as well as engaging prints and textures. Selecting a color is dependent on the colors designers are seeking to complement or contrast in the surrounding environment. Key things to consider in a metal roof color is if it's made of 'cool' pigments, that is colors that reflect heat reducing building cooling costs by up to 40%. For more information on color possibilities, please see the Steelscape Color Guide.

How do I clean a metal roof?

It is recommended to sweep or wash metal roofs regularly to avoid the buildup of dirt and debris and to help prevent premature corrosion. A suggested strategy for cleaning metal roofs is by diluting sweet or tap water with 1/3 cup of Tide® detergent or other common detergent containing less than 0.5% phosphate dissolved in one gallon of water. A clear water rinse should follow immediately. Metal roofs must not be cleaned with abrasive or chemical cleaners.

METAL WALL FREQUENTLY ASKED QUESTIONS***What is a metal wall panel?***

Metal wall panels can incorporate a wide range of products from single skin profiles, stamped tile to insulated metal wall panels. The most common metal wall panel are single skin wall panels, due to their combination of attractive aesthetics, performance and economic price point. These types of profiles are available in a wide range of designs and styles. The production of and finish options for these types of products is Steelscape's specialty. For more information on these products, please see the Steelscape Single Skin Metal Wall Buyer's Guide.

What are the advantages of metal wall panels?

Metal wall panels offer a number of advantages over other building products. They are economical to install, display vibrant color, offer superior durability and lifespans and are available in a wide variety of designs, finishes and textures which add shadow lines, texture and color to uninspiring flat surfaces. Metal wall panels are available in a variety of styles for different applications from agricultural barns to stunning high rises and everything in between. For more information on the different options available, please see the Steelscape Single Skin Metal Wall Buyer's Guide.

What are the different types of metal wall panels?

There are several different metal wall panel types from flat, flush panels to the deep ridges of commercial profiles. A point of differentiation between metal wall panels is if the fastener is concealed or exposed. Exposed fastened panels will be cheaper to purchase and install but will offer lower weather tightness and performance.

Common metal wall panel designs include:

- Flush concealed fastener profiles – Create a flat surface on a wall with only the slight gap between individual panels visible.
- Trapezoid rib profiles - Available in both exposed and concealed fastener options, with varying depths creating striking wall accent lines and shadows. Trapezoids offer the advantage of improved water shedding over flatter square ribs.
- Square rib profiles – Available in both exposed and concealed fastened options. Squarer ribs provide more accentuated shadow lines.
- Sinusoidal (curved or corrugated) - Available in both exposed and concealed fastened options, is a widely used design for roof and walls due to its versatility and softer accent lines.
- Modular and tiles – Some metal wall panels can be constructed based on individual squares, rectangles or tiles. While more expensive to install, these provide broader design flexibility as to the shapes and wall designs that can be achieved.
- Traditional agricultural profiles – Named common things such as R or U panel, these panels are optimized for speed of install and maximum coverage. Using exposed fasteners these profiles are focused on functionality over aesthetic appeal.
- Standing seam – Traditional roofing profiles, called standing seam are emerging as a popular siding product in modern building design.

For more information on metal wall panels see the Steelscape Single Skin Metal Wall Panel Guide.

Is metal better than stucco?

Metal offers outstanding durability, vibrant color and a smooth surface texture. Both metal and stucco provide protection against rot and excellent fire resistant properties. Unlike metal, Stucco can stain and accumulate dirt. Stucco will also require more periodic maintenance such as touch up and repainting and may involve a more complex install. Ultimately, the decision to select metal or stucco will likely depend on aesthetic needs. The textured, flatter appearance of Stucco may suit certain building styles such as Mediterranean or Tuscan designs. Modern metal paint technology, such as Steelscape's Rawhide offer paint texture options if designers are seeking to reduce the flat surface sheen of traditional metal products.

What is the difference between exposed fastened and concealed fastened wall panels?

The difference between these two profiles types is how the panels (also called profiles) are attached to the building. Concealed fastener profiles are attached using clips or nailing flanges which are hidden once installed. That is the next lapped panels conceals the fastener of the profile installed before it. Exposed fastened panels are attached by driving fasteners, such as screws, direct through the metal into the structure. Fasteners can be color coded to reduce the visibility of these exposed fastener heads. Concealed fastened products offer superior weather-tightness and product performance and allow for thermal movement, that is the expansion and contraction of metal as it heats and cools, which is optimal for product longevity.

What is the best color for my metal wall?

There is no 'best' color for a metal wall as it depends on a broad number of factors including the design vision, surrounding environment and other performance considerations. Metal offers superior color flexibility compared to other materials and an ability to express color vibrantly. To address evolving color trends in metal design, Steelscape has published two useful resources, a Color Guide and a Single Skin Metal Wall Guide to assist designers and end users to select the right product color for their metal wall project.

How durable are metal walls?

Appropriately installed metal walls offer exceptional product longevity and often outlast most other siding materials without the need for repainting or repairs. Metal offers the exceptional qualities of rot and termite resistance, limited permeability to water and a stable response to natural conditions such as wind, UV light, snow and rain. Metal coated with metallic coatings such as Steelscape's ZINCALUME® are designed to prevent corrosion and warrant corrosion damage up to 25 years. Modern metal paint systems such as PVDF (Kynar) systems also guarantee that not only will they last the test of time but retain their vibrant color for up to 30 years.

Does the color on metal walls fade?

The rate of color fade of a metal wall will depend on a number of factors including the paint system selected, the color selected and broader environmental conditions. There are three common paint systems available - polyesters, silicon modified polyester (SMP) and polyvinylidene fluoride (known as PVDF, Kynar or Hylar). These paint systems range from better to best with PVDF systems offering superior color fade resistance properties. A PVDF system will offer a warranty against paint fade whereas a polyester system may not. Furthermore, a PVDF system will be more expensive compared to a polyester system. Bright colors employ organic pigments compared to duller colors which are made from inorganic pigments which are modified to be more UV stable. As a result, bright, vibrant colors will fade faster compared to duller colors such as browns and grays. Also note that environmental conditions such as shade patterns and frequency of sunshine will impact the rate of fade. For more information – please see the Steelscape color guide or reach out via ‘Ask Steelscape’ on Steelscape.com

How long will a metal wall panel last?

Metal wall panels are designed to last for 30-50 years and beyond. Key factors impacting the life span of a metal wall will be the quality of the install and the appropriateness of the product selected relative to the installed environment. The quality of the install will impact factors such as water tightness and thermal movement which drive longevity. Ensuring appropriate thickness of the metal selected, the metallic coating, paint system and additional protective layers all influence the longevity of a metal wall panel. Please see the Steelscape Single Skin Metal Wall Panel Guide for more information on ways to improve the longevity of a metal wall panel system.

Painted Metal Frequently Asked Questions***What is pre-painted metal?***

Pre-painted metal reflects sheets of steel or aluminum in which paint is baked on. The term pre-painted arises from the metal being painted prior to being formed or shaped into its finished state. Not all pre-painted metal is the same - selecting the right coating can affect product lifespan, energy efficiency and visual appeal. The paint used in this process is applied in a continuous process, of speeds up to 700 feet per minute, enabling high consistency and tight quality control. As this paint is applied prior to end-forming into a finished product, it must be durable and not prone to peeling and cracking. For more information on the pre-painting process, please see the Learning Center on the Steelscape website.

What is coil coating?

Coil coating refers to the process used to manufacture pre-painted metal used in metal roof and wall, HVAC, automotive and other end products. The process is called coil coating as a continuous sheet of metal passes through multiple stages of a paint line in which the surface is cleaned, pre-treated to improve paint adhesion, paint is applied and promptly baked in ovens to cure. Once the paint is applied and cured in ovens, it is wound into a tightly wound coil for transportation to end-product manufacturers. Coils reflect an efficient way to consolidate painted metal as it enables for large volumes of material to be securely transported, and for manufacturers to feed their equipment in a continuous process which improves process speed, consistency and energy efficiency. Coil coating is a closed loop system which means that curing ovens capture and burn harmful Volatile Organic Compounds (VOCs).

How is paint applied to metal?

Paint can be applied to metal in a number of ways including air brushing, dipping and rolling. For most metal roof and wall products, the process of rolling is used in a continuous process called coil coating to apply paint to metal. In this process a metal strip passes through multiple stages of a paint line in which the surface is cleaned, pre-treated to improve paint adhesion, paint is applied and promptly baked in ovens to cure. The advantage of this process is that the paint is applied in a controlled and autonomous environment enabling high batch to batch consistency.

What is in paint?

Paint is a liquid designed for application to a surface in a thin film that cures to a solid film. Paint consists of three primary components, resins, pigments and solvents. Resins reflect the binder of the paint. Resins provide the film's physical and chemical properties including resistance to damage, resistance to corrosion and how effectively the paint adheres to a surface. The primary role of pigments is to impart color. Solvents dissolve this potent combination to a consistency suitable for application. Additives may be added to the paint to fine tune or improve performance characteristics. For more information on paint see the ‘Learning Center’ on the Steelscape website.

What is a polyester paint?

Polyesters are the entry-level paint system commonly used for metal roof and wall products. Polyesters are the most cost-effective paint solution. They offer good flexibility and hardness making them easier to form by product manufacturers. This flexibility also provides a wide range of color and gloss options. As a result, they are very versatile and can be formulated in a wide range of performance qualities. Typical Applications include gutters, downspouts, agricultural and light commercial applications and appliance wrappers. Compared to other paint systems polyester systems will offer the lowest resistance to UV light and subsequent paint fade and will typically offer the shortest product warranties.

What is silicon modified polyester or SMP paint?

Silicon Modified Polyester (SMP), also known as Enhanced Polyester reflect a more UV resistant version of a polyester paint system commonly used in residential metal roof and wall products. SMP systems include a silicone intermediate that is reacted with the polyester to enhance exterior weatherability. SMPs are often selected for their combination of performance and economical cost underpinning their common use in residential applications. SMPs offer good exterior weatherability and improved resistance to chalk and fade compared to standard polyesters. SMPs will also offer better warranty provisions compared to polyesters yet still offer a wide range of color options.

What is a PVDF or polyvinylidene fluoride paint?

Fluorocarbons / polyvinylidene fluoride (PVDF) also known by the trade names Kynar® or Hylar®, reflect the most durable paint system family available to the design community. Fluorocarbons are known by several different names but reflect the same polymer and are the superior paint system. Distinguishing features include exceptional chalk and fade resistance (UV resistance) and resistance against aggressive weather elements in addition to enhanced chemical resistance. This paint systems will offer the best performance and superior warranty coverage. Typical Applications include commercial building panels and roofs where superior weatherability is required or high visibility areas seeking to avoid prominent discoloration.

How durable is painted metal?

Painted metal produced using the coil coating process is exceptionally durable with some paint systems warranted for up to 30 years and with lifespans in the field of even greater. Coil coating applies paint in a continuous, controlled environment enabling tight quality control and high batch to batch consistency. As this paint is applied prior to forming into a finished product it must be highly durable to withstand the forming process.

What is the difference between polyester and an SMP paint system?

The key difference between a polyester and an SMP paint system is the paint chemistry. SMP systems include a silicone intermediate that is reacted with the polyester to enhance exterior weatherability. This means that SMPs have enhanced UV resistance and will fade at a reduced rate compared to polyester systems. SMP paint systems may also offer longer, more extensive warranties compared to a standard polyester system.

Is a PVDF system the best paint?

PVDF systems will offer superior chalk and fade resistance, and resistance against aggressive weather elements compared to other paint systems. The 'best' or most appropriate paint will depend on the application and the installed environment. Some applications may not necessitate the performance and subsequent cost of a high-end paint system such as a PVDF system.

Why do paints have primer?

Just like household paints, some pre-painted metal paint systems use a primer. Primers add a number of benefits to the total painted solution. Primers prepare the metal for painting by providing bite, that is to assist with the permanent adhesion of the top paint color. Primers can also provide corrosion resistance, and impact the way color is achieved. Specialty primerless resins which add additional color depth such as Steelscape's Vintage® and Eternal Collection® are engineered to produce outstanding performance without the need for a primer.

How thick is the paint on a metal roof?

As the paint used in pre-painted metal is produced in a highly controlled environment, paint can be applied in a highly efficient, consistent manner. A typical metal roof paint system is 1.4 mils thick, which includes the backer and primer. By comparison most industrial coatings are 2-5 mils thick. Sometimes additional layers of paint are added for highly corrosive environments to improve performance. For more information on paint see the Steelscape Learning Center.

What is flexographic printing?

For pre-painted metal, flexographic printing reflects the process of applying paint to metal using a pre-etched roller to create a patterned design on metal. The advantage of this process is it enables a wide variety of patterns to be created, yet still employs the highly durable paint systems used for standard metal roof and wall colors. Flexographic printing is the process Steelscape has mastered to create many of its distinctive design solutions. To see the wide range of design options available, download the Steelscape Inspiration Guide.

How can I protect a metal wall against graffiti?

Painted metal can be specified with additional layers of protection that work as a barrier against aerosol and marker-based graffiti. Graffiti on metal with this select finish can be simply wiped away once an additional removal spray is applied. Steelscape's Vintage® and Eternal Collection® come standard with this graffiti resistant attributes. Please see the Coating Capabilities section of the Steelscape website for more information.

Do painted metal roofs and walls have a clear coat?

Many automotive applications of metal have a clear coat for additional color depth, but typically metal roof and wall products will not have a clear coat applied over the top. Clear coats can add to the expense of the finish and for the majority of external metal construction applications are not required. In some instances a clear coat is applied to improve protection from environmental factors or to add an additional layer of protection against color fade.

What are 'cool' colors?

Cool colors reflect paints designed with infrared reflective (IR) pigments. These pigments are altered chemically and physically to reflect infrared wavelengths whilst still absorbing the same visible light. Compared to UV and visible light, near infrared light creates heat buildup within a structure. The purpose of these pigments is to minimize heat buildup, reducing the cooling costs of the structure. This enables the creation of a full color palette whilst offering superior reflectivity which can save building cooling costs by up to 40% in summer. This also means that darker colors, which are typically less reflective are still able to embody reflective characteristics. However, note that a lighter 'cool' color will still offer superior reflective properties compared to a darker 'cool' color and that any paint systems, not just high end PVDF systems, can be modified to be a 'cool' color.

What is covered by a metal roof or wall paint warranty?

Not all paint warranties are the same. The paint warranty will typically vary based on the paint system selected (polyester, SMP or PVDF) and the location of the installed environment. A PVDF system will offer the most extensive warranty and warrant against three elements including delamination (loss of the paint from the surface of the metal), chalking (creation of white dust on the surface as color pigments break down) and color fade. The lesser paint systems, SMP and polyester will offer shorter warranty lengths or no warranty provisions at all against things such as color fade. The installed environment of the metal will also impact the length of the warranty provided with marine and industrial environments reducing warranty lengths offered by manufacturers. Sample Steelscape paint warranties can be downloaded in the Resources section of the Steelscape website.

Why are some colors batch sensitive?

Some colors used in metal roofs and walls deploy unique pigments to achieve distinctive color properties. This includes paint with micas to achieve sparkling or light catching characteristics. Unlike standard colors, these pigments are irregularly shaped and can be more difficult to control in the production process, resulting in minor variation from batch to batch. Whilst the performance of the paint is unaffected and unobservable in isolation, this may lead to slight differences in color shades and a point of contrast once installed. This underpins why many manufacturers, including Steelscape, provide guidance on batch sensitive products to avoid batch mixing. These products can also be sensitive directionally, which means it is important that they are all installed in a singular direction. To address this these products are typically shipped with protective films with directional arrows.

Metallic Coating Frequently Asked Questions***How does metal in metal roofs and walls prevent corrosion?***

Metal roofs are made of steel or aluminum. Prior to being painted, the steel used in metal roofs and walls is passed through a molten bath of zinc (called galvanizing or TruZinc®) or a combination of aluminum-zinc (called Galvalume® or ZINCALUME®). This layer provides protection against corrosion, while utilizing the core strength and performance of the base steel. Aluminum is not prone to corrosion like steel but is more expensive and a more malleable (bendable) compared to steel.

Does a metal roof or wall rust?

While uncoated steel is prone to corrosion, the combination of the metallic coating, primer and topcoat used in modern metal roof and wall products provide a very strong barrier against corrosion, and when properly installed can last for decades. The protective qualities of aluminum-zinc metallic coatings such as Steelscape's ZINCALUME® also serve to isolate and stop the spread of corrosion in the steel if it is scratched or damaged. Throughout the world ZINCALUME® metal roofs have been in the field for longer than 30 years without any degradation in corrosion performance. While metallic-coated steel offers excellent corrosion performance, environmental factors such as salt air, chemicals, standing water and failure to periodically clean a roof surface can impact the longevity of a metal system.

What is a metallic coating?

A metallic coating reflects a layer of metal elements applied to the surface of steel to improve corrosion performance. Typically this is applied in a continuous process of passing a strip of steel through molten baths of protective metals. The two main options are through a bath of zinc alone, which is called galvanizing (TruZinc®), or through a combination of Aluminum and Zinc, called Galvalume® or ZINCALUME®. Steelscape has the ability to produce both types of metallic coatings.

What is Galvalume®?

Galvalume® is a trade name for a metallic coating applied to steel comprising of 55% aluminum and approximately 44% zinc plus a small amount of silicon. This serves to provide improved corrosion resistance of the end-product. The aluminum component of aluminum-zinc provides corrosion protection and the zinc component provides the sacrificial characteristic that protects material edges and cuts. Silicon serves to control the reaction of with the steel surface promoting adhesion. While this means that the aluminum-zinc combination offers superior performance compared to zinc alone, Environmental considerations can influence metallic coating choice. The Al-Zn combination is sensitive to alkaline environments and as a result should not be installed directly around concrete. Please see the ZINCALUME® technical bulletins found in the Resource Center for more information.

What is ZINCALUME®?

ZINCALUME® reflects Steelscape's trade name and distinctive process for producing aluminum-zinc metallic coated steel. Steelscape has mastered this process ensuring both high product quality and consistency. Aluminum-zinc offers a superior barrier against corrosion with the aluminum component (55%) of aluminum-zinc providing corrosion protection and the zinc component (44%) providing the sacrificial characteristic that protects material edges and cuts. The trace amount of silicon serves to control the reaction of with the steel surface promoting adhesion. The advantage of ZINCALUME® over galvanized material is that it offers a substrate warranty of 25 and a half years against corrosion. ZINCALUME® also reflects a pre-developed coating weight and an optimum aluminum-zinc combination to maximize corrosion resistance performance. Please see the ZINCALUME® technical bulletins found in the Resource Center for more information.

What is TruZinc®?

TruZinc® reflects Steelscape's state-of-the-art hot dipped galvanization process. That is the application of a surface layer of zinc to the steel surface to improve corrosion performance. This is applied by passing a continuous strip of steel through a molten bath of zinc.

What is galvanized steel?

Galvanized steel, which Steelscape calls TruZinc®, reflects steel coated with a surface layer of zinc in order to provide protection against corrosion. Zinc is typically applied in a continuous process on a metallic coating line (MCL) in which it is applied by passing a continuous strip of steel through a molten bath of zinc. Steelscape employs an advanced galvanizing line to ensure high quality metallic coated products.

What is the benefit of Galvalume® or ZINCALUME® over galvanizing?

Aluminum-Zinc offers a superior barrier against corrosion with the aluminum component of Aluminum-Zinc providing corrosion protection and while the zinc component provides the sacrificial characteristic that protects material edges and cuts. This contributes to a total solution that will typically outlast a traditional galvanized product. A key advantage of Galvalume® or ZINCALUME® over galvanized material is that it offers a substrate warranty of 25 and a half years against corrossions. Hot dipped galvanization does not offer a warranty.

What is the difference between steel and aluminum used in metal roofs and walls?

There are a number of key differences between steel and aluminum used in construction including corrosion performance, product strength and price. Aluminum offers superior corrosion performance to steel and may be more suitable to highly corrosive environments. Both materials are relatively light, however aluminum is lighter. Aluminum is more malleable (bendable) than steel which means it typically needs to be thicker for flatter applications like roofs and walls in order to achieve required product performance such as wind uplift. This contributes to the significant price premium of aluminum over steel for these applications. Both materials offer exceptionally long product lifespans, are highly recyclable and available in a vast array of colors.

What is embossing?

Embossing is the process of applying a surface texture to steel through imprinting raised areas from the flat sheet of steel. Common patterns include stucco and woodgrain. Embossing is achieved by passing sheets of finished steel through embosser rollers to imprint the metal. Embossing serves to break up and add texture to large flat surfaces of steel and to reduce the unintended waviness effect of flat steel. Steelscape offers non-directional stucco embossing, for more information please see the Capabilities section of the Steelscape website.

About Steelscape Frequently Asked Questions

What does Steelscape do?

Steelscape produces steel used in metal roofs, walls and other construction products. This steel is also used in things such as walk in coolers, metal planter boxes and sheds. Steelscape produces steel exact to customer needs in addition to applying the corrosion resistant metallic coating and final paint finish. Steelscape has been doing this for over 50 years. Today in conjunction with advanced production equipment and the best team in the industry, Steelscape delivers superior products to customers to turn into finished items such as metal roof and wall profiles.

How does Steelscape make its products?

Steelscape has several capabilities related to the production of steel used in steel framing, metal buildings, metal roof and wall products and other applications. Key activities that Steelscape undertakes in the production of high-quality steel include:

- **Pickling** – This includes a series of acid baths to clean the steel to ensure the proper surface is produced for metallic coating and trimming to specified final width.
- **Cold Rolling** – This reduces the thickness of the steel to the customer's specifications by passing steel through a series of rollers. Steelscape's reversing cold rolling mill employs closed-loop computerized quality control gauges, a unique feature for reversing mills, that ensures precise tolerances for exacting customer requirements.
- **Metallic-Coating** – The steel is coated with a protective, proven combination of metals that provide effective corrosion resistance. At Steelscape, the protective metallic coatings include TruZinc® (galvanized) and ZINCALUME® (Galvalume®).
- **Painting** – Steelscape's facilities are equipped to coat metal with a range of quality paint systems designed for long-life performance and outstanding color.
- **Finishing** – Steelscape has slitting, cut-to-length, and embossing capabilities to ensure the final product is finished to exact customer needs.

Why genuine Steelscape steel?

As metal roofs and walls and many other products use pre-painted, the application of coatings to the metal is highly important as this is a key deciding factor of the products aesthetics, durability and quality. The consistent finish of the surface, its warranty, corrosion performance, long-term durability and finally, the color, are all fundamental elements applied by Steelscape in the pre-painting process. Requesting genuine Steelscape steel guarantees not only the highest quality finish and outstanding product quality, but ongoing product and warranty support.

How does Steelscape manage quality?

Steelscape prides itself on delivering the highest quality products in the industry. Steelscape achieves this by employing highly motivated production teams, using advanced production equipment and by having a broad, experienced team dedicated to the management of quality and continuous improvement. Steelscape also ensures that all its products exceed relevant American Society for Testing and Materials (ASTM) standards.

Where do I buy Steelscape products?

Genuine Steelscape steel is available from reputable metal roof and wall product manufacturers and other steel users throughout the US. Inquire with your metal roof and wall supplier, distributor or contractor if the steel is genuine Steelscape steel. Steelscape can provide more information on how to buy Steelscape steel upon request, simply reach out via 'Ask Steelscape' on Steelscape.com or call (888) 553-5521.

How can I see examples of Steelscape's work?

Steelscape has a broad range of tools in which to see stunning projects using Steelscape products. First our project gallery has an extensive range of stunning structures using Steelscape steel. Secondly our learning center has a number of project spotlights and design insights to learn more about specific Steelscape projects. Finally, our various inspiration, color and design guides can be used to provide additional inspiration. For additional projects not published on Steelscape's website reach out via 'Ask Steelscape' on Steelscape.com or call (888) 553-5521. Alternatively request a product sample via Steelscape.com

How can I contact Steelscape or obtain more information?

Easy. Reach out via 'Ask Steelscape' on Steelscape.com or call (888) 553-5521.