



WESTERN STATES METAL ROOFING

USA | CANADA | MEXICO | SALES@CORTENROOFING.COM | 855-4CORTEN (855-426-7836)

FREQUENTLY ASKED QUESTIONS

Your guide to the most frequently asked questions about rusted roofing and siding.

On the cover:
7/8" Corrugated - A606-4 (aka Corten®)

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FIRST, A LITTLE BIT ABOUT WESTERN STATES METAL ROOFING...

Western States Metal Roofing is the leader in metal roofing and siding products that look old and weathered. Our company specializes in buying Corten in large quantities and then passing those cost savings on to the end user. In addition, we have developed authentic looking painted panels designed to replicate the look of a real Corten, patina'd copper, or an aged galvanized finish. We have stunning colors that actually look like real patina'd metal. There is no other company in the industry that has an equal color selection or authenticity of paint prints. Let us help you transform your metal roof or siding job from ordinary to extraordinary.

We are a family business and our main goal is earning your trust. We specialize in selling direct to homeowners and contractors. The staff at Western States consists of knowledgeable individuals with experience in design and construction. It does not matter where your job is located. We can deliver it inexpensively on one of our route trucks throughout the entire USA, Canada, and Mexico.

After selling hundreds of rusted roofing jobs we found that most of our new clients had the same questions to ask. That's why we decided to turn all these questions into an easy-to-read-e-book made just for you.

WHAT IS CORTEN?

Weathering steel, best-known under the trademark COR-TEN® steel, is a group of steel alloys which were developed to eliminate the need for painting, and form a stable rust-like appearance when exposed to the weather for several years.

The name COR-TEN® refers to the two distinguishing properties of this type of steel: **corrosion** resistance and **tensile** strength.

Weathering steel has increased resistance to atmospheric corrosion when compared to other steels. COR-TEN® resists the corrosive effects of rain, snow, ice, fog, and other meteorological conditions by forming a coating of dark brown oxidation over the metal. This inhibits deeper penetration and negates the need for painting and costly rust-prevention maintenance over the years. In simple terms the steel is allowed to rust and that rust forms a protective coating that slows the rate of future corrosion.

CORTEN VS BARE STEEL. WHICH IS BETTER FOR MY ROOF?

Would you spend 20K on a roof that would give you a 40 year lifespan in the correct conditions or would you spend 18.5K-19K on that same roof and get about half the lifespan? That is really the heart of this question. It amazes me that we sell a fairly equal amount of both products. Corten roofing will cost an additional thirty to fifty cents per square foot when compared to bare cold rolled roofing. If you have a typical 30 SQ roof that equates to \$ 1,000 to \$ 1,500 additional for your project. At first glance this may seem like a lot of extra money. However, when you look at the FINISHED cost of your roof including underlayment, fasteners, trim, and labor; it actually is a very modest increase in cost. You will get a SUBSTANTIALLY longer lifespan when using Corten vs bare steel.

Corten contains copper, chromium, manganese, and nickel which makes this material more expensive. Corten resists the corrosive effects of rain, snow, ice, fog, and other meteorological conditions by forming a coating of dark brown oxidation over the metal, which inhibits deeper penetration and negates the need for painting and costly rust-prevention maintenance over the years. Corten will last longer and would be more desirable in harsh climates. If you purchase Corten® always ask for the mill certs as it does not visually look different than bare steel. Make sure you are getting what you paid for. If the price looks too good than there is likely a reason why.

Both products have a similar appearance. They both will arrive with a dull gray finish and then they will begin to rust. Bare steel tends to rust a little more orange and Corten tends to rust to a cinnamon brown color. It is my personal opinion that the aesthetics of both are similar enough that it should not be much of a factor when making this choice. The two main factors to consider are lifespan and price. I would personally only use A606-4 on my roof. However, I would not hesitate to use bare steel on a wall panel or fencing panel. Keep in mind that both products do NOT have a warranty. If you want a product that is warrantable than we recommend using Painted Rusted Roofing.



🌀 WHAT IS PAINTED RUSTED ROOFING?

Painted roofing panels that look old and weathered are the best alternative for an instant rustic appearance. Also known as specialty paint prints, it is a product that has been painted repeatedly giving the finish depth and uniqueness. The paint line applies a base coat of solid color on the coil. The coil is then painted a second time with a different color using a special engraved paint roller that creates a rustic pattern on the coil. A paint print will try to replicate a naturally occurring patina. Specialty paint prints normally consist of painted panels that try and replicate the following appearances: orange/brown rust, faded dull gray, patina'd copper, or blackened steel.

🌀 WHAT IS BARE COLD ROLLED? HOW IS IT DIFFERENT FROM CORTEN?

Bare Cold rolled steel is used as a less expensive option to A606 Type 4 (commonly referred to as Corten). Although both types look similar in appearance, they are very different. Corten contains copper, chromium, manganese, and nickel which makes this material more expensive when compared to bare cold rolled. Corten will last longer and is recommended in harsher climates. After installation and exposure to normal weather the surface of both of these finishes develop a gorgeous rusted patina.

🌀 WHAT IS A606 TYPE 4?

In simple terms A606-4 is light gauge Corten without the trademarked name. The original COR-TEN received the standard designation A242 (COR-TEN A) from the ASTM International standards group. Newer ASTM grades are A588 (COR-TEN B) and A606 for thin sheet. All alloys are in common production and use.

🌀 HOW MUCH DOES RUSTED ROOFING COST?

Rusted roofing is a beautiful product and it is also inexpensive. The price point on this material is comparable to a standard Kynar® painted product. In some cases, it is quite a bit cheaper. When you are researching your options there are three different finishes: Corten/A606-4, bare cold rolled steel, painted rusted roofing

Bare cold rolled steel will cost about 25%-35% less than Corten steel. It will cost less than a painted metal panel. Corten roofing cost about the same amount of money as a painted metal panel. It's 25%-35% more than Bare steel. Painted rusted roofing will cost 40%-50% more than Corten steel.

If you need a current and accurate price, we suggest that you contact a sales representative for a quote. The steel market is volatile so we don't list pricing on this website.





7/8" Corrugated - Bare Cold Rolled

☹️ IS THERE A WARRANTY?

There are no warranties for products made from bare steel or Corten/A606-4 steel.

☹️ WILL THE PANEL CONTINUE TO RUST?

Corten never completely stops rusting. The weathering process occurs after the panel is installed. It eventually decreases and from that point on the finish acts as a protective coating for the base metal.

This protective coating essentially stops the corrosion. Laboratory analysis of the rust film have shown that the alloying elements in the steel, particularly copper, chromium, and nickel produced insoluble compounds that clogged the pores at the rust/steel interface, thereby ending the regeneration.

☹️ CAN I BUY COR-TEN®?

No, COR-TEN® is a trademark of U.S. Steel. They no longer make this product. ASTM A606-4, A588, and A847 is Corten without the trademarked name. If you want COR-TEN® this will be the best available option. Weathering steels, such as ASTM A588, A242, A606-4 and COR-TEN® exhibit superior corrosion resistance over regular carbon steel as a result of the development of a protective oxide film on the metals surface which slows down further corrosion. If you are looking for a panel that will give you a rustic look the two best options are bare cold rolled finish and A606-4. A606-4 will cost more, but it will last longer.

☹️ A588 VS A606-4 WEATHERING STEEL

A588 is a high strength low alloy plate used for structural applications such as buildings and bridges.

A606-4 is used for thin sheets and has thicknesses up to 3/16" and used roofing and wall applications.

HOW IS THE SQUARE FOOTAGE CALCULATED?

You might be wondering if you are charged by the coverage of the panel or the actual width of the panel. Here are some guidelines when calculating square footage.

- **7/8" Corrugated:** The width of the panel is 37". On a roof there is 32" of coverage and on a wall there is 34 2/3" of coverage. Square footage is based upon 36".
- **1/2" Corrugated:** The width of the panel is 26". There is 24" of coverage. Square footage is based upon 26".
- **R Panel & Western Rib:** The coverage is 36". Square footage is based upon 36"



Flat Sheets - A606-4 (aka Corten®)



HOW LONG WILL CORTEN ROOFING LAST?

There is no definitive answer to this question. It depends on the environment and the way in which it was installed. Many projects using bare cold rolled and corten products were installed in excess of forty years ago and there are no problems. It is likely that the panel will last at least two to three times as long as wood shingles. Corten will have a longer life-span than bare cold rolled steel. One of the most common problems is using a light gauge steel in a 24GA to 29GA range. Using a heavier gauge steel is the most important thing you can do to make your roof last. There is no warranty for either bare cold rolled or Corten, but there are a number of things that you can do to increase life span of the product.

WHAT CAN BE DONE TO INCREASE THE LIFESPAN OF RUSTED ROOFING?

- Use a heavy gauge steel in a 20GA or 22GA.
- Keep the roof free of debris and falling objects.
- Have a minimum slope of 3 in 12.
- Prevent moisture and debris entrapment. It is not a rustproof material. If water is allowed to accumulate in pockets, those areas will experience higher corrosion rates, so provision for drainage must be made.

Weathering steel is sensitive to climates with exposure to salt laden air. It is possible in these types of climates that the protective patina may not stabilize, but instead continue to corrode.

WHICH CLIMATES CAN I USE WEATHERING STEEL?

Do not use rusted roofing in these climates:

- Climates with exposure to salt.
- Climates in which the material will be subject to excessive moisture.

Corten steel requires alternating wet and dry cycles to form a properly adhered protective layer. Areas that have salt laden air, high rainfall, humidity, or persistent fog are typically not the proper environment for Corten and even less so for Bare Steel.

WHAT GAUGE STEEL SHOULD BE USED?

22GA or heavier for bare cold rolled or A606-4 (aka Corten).

WILL THE RUST STAIN THE SURROUNDING AREAS?

Yes, rust runoff will likely stain the surrounding areas.

WHAT DO I HAVE TO DO TO GET THE MATERIAL TO RUST?

Nothing. This material will rust on its own if left exposed to the weather. Getting the material wet will increase the speed in which it rusts.

DOES THE A606-4 (AKA CORTEN) COME PRE-RUSTED?

A606-4 and A588 steel arrives UNRUSTED and will rust with naturally exposure to the weather.

☹️ DISSIMILAR METALS AND CORTEN

In general do NOT use dissimilar metals with Corten. Galvanized, Galvalume®, and zinc should NOT come into contact with Corten. Stainless steel is compatible with Corten.

☹️ CAN CORTEN STEEL BE WELDED?

You can weld weathering steel using the same flux combinations so that the tensile strength of the deposited weld metal (welding rod or wire) is consistent with the tensile strength of the base metal (weathering steel). Typical tensile strength of based metal (weathering steel) is 68-78 KSI. We would advise only welding A606-4 or A588 together. Welding to other metals can lead to a dissimilar metal reaction with A606-4 or A588.

☹️ WHAT METAL GAUGE IS NEEDED FOR FLAT SHEETS?

A metal's gauge refers to its thickness, which greatly affects its resistance. Since flat sheets can be used in a variety of applications and are considered a design and build product, we recommend consulting with the designer or engineer of your project to determine the gauge required.



Flat Sheets - Bare Cold Rolled

☹️ CAN A CLEAR COAT BE APPLIED TO CORTEN PRODUCTS?

If you choose to clear coat the material, do it after the A606-4 has a good rust/patina set into the steel. If you do it prior to a good rust/patina, then it is very likely your clear coat will take off the rust.

If you add a clear coat to the A606-4 material it will likely change the surface color due to the additives in your clear coat.

We do not have a specific recommendation on clear coatings. We recommend you check with your local paint supplier and get their recommendation as they are the coating experts.

☹️ WHAT KIND OF UNDERLAYMENT SHOULD BE USED WITH CORTEN?

It is recommended to use a high temperature underlayment.

☹️ WHAT TYPE OF SCREWS CAN BE USED WITH CORTEN?

Stainless steel screws with a painted dark brown head are the recommended choice for fastening panels.



Rustwall® - A606-4 (aka Corten®)

For more information, please contact:



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