

Paint Warranties



Do They Apply in Coastal Environments?

By Brian Partyka

Warranties are intended to be a safe haven, a guarantee of the integrity of a product. Manufacturers offer several types of warranties for prepainted metal roofing systems, but what do these warranties really cover? This question may not be easy to answer, especially when the roofing product is exposed to a harsh saltwater environment. One area of confusion is the difference between a paint warranty and the substrate

corrosion warranty. When it comes to paint warranties, corrosion of the metal substrate due to salt exposure is generally not covered.

Knowing the Risks

One of the most important aspects of our business is making sure a product that is chosen won't fail in its built environment. For contractors, that means installing a product that minimizes the need for return visits to make repairs. For architects, that means



specifying a product that gives the best results.

Contractors and architects should be aware of the risks involved when installing a steel roof system in a saltwater environment. Let's say, for example, that an architect specifies a roof product made of prepainted, coated carbon steel (galvanized or Galvalume) for a home located 75 feet from a beach. The specification reads: "This product is to utilize a Kynar 500/Hylar 5000 paint system that carries a 20+ year paint warranty."

The contractor installs the system per the project specifications, and everyone is completely satisfied with the results.

Five years later, the contractor receives a phone call from the distraught homeowner, who claims that corrosion is occurring at the eaves and creeping its way up the roof. Assuming that the product is covered against this type of condition under the manufacturer's warranty, the contractor calls the supplier fully expecting the manufacturer to replace the roof. However, the contractor doesn't realize that due to the corrosive coastal environment to which the roof is exposed, the prepainted product is not covered under the warranty.

Choosing or specifying the right product begins with knowledge and understanding of how the roof system will react and perform in a certain environment. The substrate of a prepainted steel roofing product is either Galvalume or hot-dipped galvanized carbon steel. Hot-dipped galvanized steel offers the sacrificial protection of zinc. Galvalume, which is aluminum/ zinc alloy-coated carbon steel, provides the superior barrier corrosion resistance of aluminum along with the sacrificial protection of zinc. Pretreatments, primers, and paint complete the painted steel product.

During fabrication, transport, handling and installation of the painted roof panel, shearing the edge or scratching the surface will disrupt the original system put into place to protect the carbon steel. The panel's defenses have been weakened, and the product may begin to corrode—especially once it's exposed to a corrosive environment. At the cut edge or scratch, the metallic coating's ability to create the appropriate galvanic reaction has been somewhat compromised. This reaction has little to do with the performance of the paint. However, the paint can actually retard the desirable chemical response of the zinc to form the appropriate galvanic protection.

Caveats of Paint Warranties

So what is covered by a paint warranty? Many paint companies underwrite their warranties with certain distance restrictions to salt or other aggressive environments. (The metallic coating warranty, especially for Galvalume sheet, in like fashion will exclude harsh environments like salt-spray.) A standard paint warranty typically covers the following areas:

Film integrity. This warrants that the paint is not going to crack, flake, or delaminate from the surface of the substrate in "normal" atmospheric conditions. It does not include "microfracturing" on the radii that can occur during roll forming and there may be limitations of the severity of the bend radius. Saltwater as well as other aggressive environments are excluded.

Color fade. This states that the paint will not change color (fade) to excess as defined by the warranty language using a numeric range of color units. However, it does not warrant against painted surfaces fading at all, or fading uniformly when exposed to different conditions, such as facing a different direction or shaded vs. unshaded.

Chalking. Chalking, or the decomposed powdery residue that forms on the surface of most painted surfaces with the passage of time, is allowed under typical paint warranties. The permissible amount of this residue varies with the type of paint and the specific language of the warranty. Once again, it is designated numerically.

A paint warranty does not cover corrosion of the base metal in a saltwater or aggressive environment.

Preventive Measures

Homeowners or building owners who want to install a prepainted steel roof in a coastal area can take some preventive measures to avoid or minimize corrosion. A periodic fresh water rinse is recommended for all roof areas,

including soffit, that aren't exposed to rainfall. Although this step can help prevent rust, it may not eliminate the problem. Any areas of the roof that have been scratched or cut during installation or fabrication can be touched up with a field-applied coating recommended by the manufacturer of the paint system used on the panels.

Painted steel products for roofing applications are becoming more commonplace, and this trend is expected to continue for many years. In most environments, painted steel roof systems are extremely durable and will provide many years of maintenance-free service. In aggressive environments, however, it's important to understand how the product will react and how to ensure the best per-

formance. Contractors installing prepainted steel roof panels should be proactive and have the manufacturer or supplier write a disclaimer stating exactly what is covered under the warranty. This disclaimer should be included in the bid. ■

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