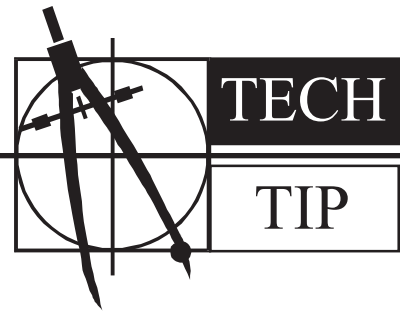


Metals in Marine Environments

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Durability and strength are two benefits that are fueling the growing popularity of metal roofing. Whether used for commercial or residential applications, metal roofing is proven to withstand hurricane strength winds. Structures protected with metal roofing have survived the worst of the recent hurricanes.

Given its inherent ability to withstand the severest weather conditions, building code officials, community associations and individuals alike are looking to replace standard asphalt and clay tile roofing with metal roofing systems. Metal's usage in direct coastal applications has been limited, however, due to its inability to withstand the corrosive effects of the sea's salt laden air.

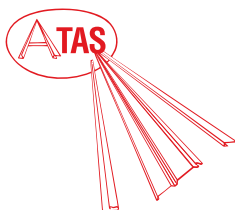
Traditionally, metal panels have not been recommended for applications located closer than one mile from the sea's coast. This recommendation, however, applies to coated steel panels, not aluminum. Since steel is highly susceptible to corrosion, most paint manufacturers require a heavy primer and film thickness when their paint system is applied to a metallic coated panel system. These heavy film thickness coatings are generally not stocked as a standard for most panel manufacturers; therefore, the cost of such panels becomes prohibitive for an average size project.

A cost-effective solution is to select a pre-painted aluminum panel system. Aluminum is resistant to the corrosive effects of a marine environment; therefore, panel manufacturers can use a standard stock Kynar 500[®] or Hylar 5000[®] based paint system when manufacturing the panel system.

In support of this recommendation, pre-painted aluminum panels were tested in accordance with the ASTM standard B0117-85 (salt fog tolerance) and passed at 3000 hours, whereas the metallic coated¹ steel products passed at 1000 hours.

As with any general recommendation, local climate conditions such as rainfall and humidity levels may effect a product's overall performance. The results, however, have prompted a leading paint manufacturer to recommend the use of their Kynar 500[®] or Hylar 5000[®] based paint system on aluminum panels located 0 to ¼ mile from the sea coast.

¹Results reported for G90 HDG, Galfan and Galvalume[®] coated steel.
Kynar 500[®] is a registered trademark of Arkema Inc.
Hylar 5000[®] is a registered trademark of Solvay Solexis, Inc.



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