

## Tech Note #7: Corrosion

Registered to ISO 9001:2000

This Tech note is provided as a guideline and a reference in choosing the proper hardware for your application. Corrosion factors are impacted largely by the application and environmental exposure. Application of hardware using incompatible materials can and will elevate the opportunity of galvanic reaction within the assembly and therefore reduce the corrosion resistance of the hardware.

AmesburyTruth's standard warranty does not cover corrosion; however, in the selection of your window hardware, AmesburyTruth recommends that you consider your environmental conditions. Atmospheric conditions prevalent in city/industrial areas and coastal areas will require hardware that is manufactured from more corrosive resistant materials than standard hardware. We have also found that the "typical" residential window application exposes the window hardware to household cleaning products which can severely damage the normal protective finishes. Some of these products include: paint removers, brick washes, window cleaners, siding or vinyl cleaners, chlorine based cleaners, etc. Proper selection and application of the hardware is critical to ensure hardware performance. Hardware selection is even more important for coastal applications, as this is an aggressive environment for such application. A coastal location is defined as any area which is within 4 miles of water affected by ocean tide.

Based on testing and continual improvement, AmesburyTruth offers a number of unique protective finishes for our hardware.

**E-Gard® Hardware** – A multi-stage e-coat process specifically engineered for AmesburyTruth window hardware components. E-Gard Hardware coating is designed to protect both steel and zinc parts from the effects of residential cleaning agents as well as corrosion caused by acid rain, ultra violet radiation, and wood preservatives.

**Powder Coat** – Electro-statically applied, thermal-set polymer paint. With the enhanced available powder chemistry technology, this coating performs comparable to E-gard coating.

**Stainless Steel Product** – AmesburyTruth offers equivalent products in stainless steel for the proper selective application. All stainless steel are made from austenitic materials and all are passivated for enhanced corrosion protection.

## Plated Finishes on Coastal Applications

AmesburyTruth supplies many of our products with decorative plated finishes such as bright brass or brushed copper nickel. Due to the reactive nature of these types of finishes they are not recommended for coastal applications. Our solid or metallic powder coat finishes are much more resistant to corrosion since they are applied more heavily and are baked on.

## Selection of Fasteners

The selection of the fasteners used in mounting the hardware should also be considered for maximum corrosion resistance. The simplest rule to follow is to match the screw material or finish to the hardware being mounted. For example, an E-gard coated product should be mounted with E-gard coated or zinc chromate or zinc screws. This matching will help reduce formation of galvanic corrosion (Please refer to Tech Note 1-specifically for mounting screw compatibility for additional information).

## Testing Methods Used at AmesburyTruth

AmesburyTruth has followed many different test methods throughout the selection process for the finishes. As part of the on-going quality assurance, AmesburyTruth conducts salt spray testing according to ASTM B-117 to validate the performance of the coating. AmesburyTruth product is designed to meet or exceed the corrosion performance as stated in AAMA 907, ASTM D 1654, and D 714.

