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TRI-SEAL™ LONG-LIFE COATING

TRI-SEAL™ Long-Life Coating is a high performance dip spin finish, developed to minimize corrosion when used in exterior building applications. It consists of three layers; the first layer is a metallic zinc layer, the second layer is a high-grade anti-corrosion chemical conversion film and the third, outer layer, is a baked ceramic surface coating.

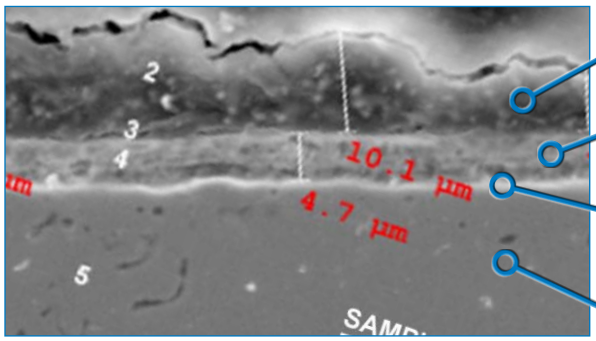
The distinguishing feature of **TRI-SEAL™** is the tight joining of the baked ceramic surface coating and the chemical conversion film. These two layers are bonded together through chemical reactions, and this unique method of combining layers result in a rigid combination of the coating films.

- Excellent resistance against gas, weather, and other kinds of corrosion factors, including salt water.
- Compatible for use in ACQ and Fire Treated Lumber.
- Composite layers minimize the effect of scratches on the protection coating.

Salt Spray Test Results
1,000hrs Per ASTM B117

Compatible for use in treated lumber

SEM IMAGING



Layer 1 - Baked Ceramic Surface Coating Layer
Corrosive elements are intercepted by the strong paint film made of ceramic materials.

Layer 2 - Chemical Conversion Coating Layer
Rust proof performance is improved as the chemical conversion inactivates the zinc plated surface and creates a tight adhesion between the chemically converted layer and the paint layer.

Layer 3 - Metallic Zinc Layer
The steel / iron substrate is protected from corrosion by the self-sacrificial galvanic effect of the zinc coating.

Layer 4 - Fastener

MATERIAL PROPERTIES

Test Items	Test Methods	Test Results
Hardness	Peeling test by pencil hardness	Over 4H
Adhesion	Peeling test by adhesive tape on cross scribed test piece in 1 mm width	Nothing abnormal
Acid Resistance	Immersion in 5% sulfuric acid solution for 24 hours	Nothing abnormal
Alkali Resistance	Immersion in 5% sodium hydroxide solution for 72 hours	Nothing abnormal
Heat Resistance	Exposure to 250 C (482 F) heat for an hour	Nothing abnormal
Accelerated Weathering	Sunshine weather-0-meter test for 1,000 hours	Free from red rust
Contact Corrosion w/other Metals	Corrosive investigation after Salt Spray Test (JIS Z2371) done comparatively on surface treated steel bolts/nuts tightened on a stainless steel plate	Clearly superior to zinc electroplated (colored chromate) and hot dip galvanizing

Corrosion Testing
Salt Spray: 1,000hrs.
Per ASTM B117.
No red rust

Kesternich: 30 cycles.
Per DIN 50018

Contact TFC for additional details on TRI-SEAL™.

DISCLAIMER: ALL TEST RESULTS AND SPECIFICATIONS ARE A RESULT OF LABORATORY TESTS. APPROPRIATE SAFETY FACTORS SHOULD BE USED BY THE USER OR SPECIFIER. DETERMINING THE PROPER FASTENER IS THE RESPONSIBILITY OF THE USER OR SPECIFIER. SINCE APPLICATION CONDITIONS VARY AND ARE UNCONTROLLABLE BY TFC, WE ASSUME NO LIABILITY FOR THE USE OF THIS INFORMATION.

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