

The qualities of **TRINAR® TF5**

A thick film high-performance PVDF coil coating system



Product information and performance specifications for TRINAR TF5 high-performance fluoropolymer finishes

Product Information

TRINAR TF5 is a high-performance fluoropolymer coating containing 70% polyvinylidene (PVDF) resin. This unique resin is combined with other proprietary resins and the highest quality ceramic and select inorganic pigments for the finest metal finish available.

This five-coat system, which utilizes our High-Build Primer, provides unparalleled protection against harsh environmental weathering for decades. It has a tough but flexible finish, and is perfectly suited for high end residential, institutional and commercial applications. TRINAR TF5 meets or exceeds all requirements of AAMA 620/621 and AAMA 2605.

General System Information

TRINAR TF5 is approved for use on the following substrates: Hot-Dipped Galvanized (HDG), Galvalume® and Aluminum.

TRINAR TF5 is a factory-applied finish that is applied through roll coating to properly cleaned and pre-treated first-quality substrates, and then oven-baked to cure. It is a five-coat system, composed of a topcoat over four coats of our proprietary High-Build Primer.

Field Performance

When applied in accordance to specifications the following field performance can be expected from TRINAR TF5.

Film Integrity	35 years
Chalk	No more than #8 for 35 years
Fade	No more than 5 ΔE Hunter units for 35 years

TRINAR TF5 COOL CHEMISTRY® Series

TRINAR TF5 is also available in our COOL CHEMISTRY Series, which contains ceramic infrared reflective pigments. These special pigments are designed to reflect infrared energy while still absorbing visible light energy, thus appearing as the same color yet staying much cooler. When COOL CHEMISTRY Series coatings are used on metal roofing, the result is a sustainable building material that can lower air conditioning costs, reduce peak energy demand, and help to mitigate urban heat island effects. All of our high-performance coatings for building products are also available in COOL CHEMISTRY versions.

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 **TRINAR® Coatings.**
The color you spec is the color that stays.

Application Characteristics

Film Thickness	Topside finish: [First Pass] Primer (dry) = 1.0 – 1.1 mils; Primer (dry) = 1.0 – 1.1 mils. [Second Pass] Primer (dry) = 1.0 – 1.1 mils. [Third Pass] Primer (dry) = 1.0 – 1.1 mils; Topcoat (dry) = 0.70 – 0.80 mils. Reverse side finish: Primer (dry) = 0.15 – 0.25 mils; Pigmented polyester backer (dry) = 0.30 – 0.40 mils. Topside Total DFT for system = 4.70 – 5.20 mils. All measurements per ASTM D 1005 or D 5796.
Topside Color	Controlled to the Master Standard by an approved Color Difference Meter or Spectrophotometer, and by visual match under daylight and horizon light of a Macbeth Daylight Booth per ASTM D 1729.

Physical Properties

Specular Gloss	25% - 35%. Determined per ASTM D 523 at a glossmeter angle of 60°.
Pencil Hardness	Minimum pencil hardness, per ASTM D 3363, is "HB".
Solvent Resistance	Passes minimum of 100 double rubs of a MEK soaked cloth, per ASTM D 5402.
Cross-Hatch Adhesion	No paint removal with Scotch #610 cellophane tape after cross-scoring with eleven horizontal and eleven vertical lines 1 mm apart, per ASTM D 3359.
Impact Resistance	No visible paint removal with Scotch #610 cellophane tape after direct and reverse impact of 80-inch pounds, using 5/8" steel ball on a Gardner Impact Tester, per ASTM D 2794.
T-Bend Adhesion	Per ASTM D 4145, no loss of adhesion when taped with Scotch #610 cellophane tape when subjected to a 2T-Bend.

Testing Data

Humidity Resistance	No blistering, cracking, peeling, loss of gloss or softening of the finish on HDG, Galvalume, or Aluminum after 4000 hours of exposure to 100% humidity at 100°F ± 5°F, per ASTM D 2247.
Cleveland Condensing	No blistering, rusting or loss of adhesion of the finish after 1500 hours (HDG, Galvalume) or 3000 hours (Aluminum) of exposure at 120°F, per ASTM D 4585.
Water Immersion Resistance	Samples immersed in distilled water at 100°F per ASTM D 870 will exhibit no loss of gloss, blistering, cracking or color change after 500 hours.
Salt Spray Resistance	Samples diagonally scored and subjected to 5% neutral salt spray for 2000 hours (HDG, Galvalume) or 4000 hours (Aluminum), per ASTM B 117, then taped 1 hour after removal from the test cabinet with Scotch #610 cellophane tape, exhibit no blistering, no loss of adhesion and scribe creep no greater than 1/8".
Chemical Resistance	No significant color change after 24 hours exposure to 10% solutions of hydrochloric and sulfuric acids, per ASTM D 1308, Procedure 7.2 (spot test).
Kesternich Test	No significant color change after 10 cycles in a SO ₂ chamber, per ASTM G 87.
Accelerated Weathering	5 Hunter ΔE maximum color change, and at least #8 chalk rating after 10,000 hours exposure, per ASTM G 151 and G 154 using UVA-340 bulbs.
Exterior Weathering	Florida exposure (45° South), 5 Hunter ΔE maximum color change, per ASTM D 2244, and at least #8 chalk rating, per ASTM D 4214, Method A, after 20 years real-time exposure.
Abrasion Resistance	Per ASTM D 968, Method A, TRINAR passes 350 +/- 20 liters minimum of falling sand.
Flame Spread Rating	TRINAR displays a flame spread classification of A (Class 1) when tested in accordance with ASTM E 84.



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