

# The qualities of **TRINAR® TF4**

A thick film high-performance PVDF coil coating system



## Product information and performance specifications for TRINAR TF4 high-performance fluoropolymer finishes

### Product Information

TRINAR TF4 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 four-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 TF4 meets or exceeds all requirements of AAMA 620/621 and AAMA 2605.

### General System Information

TRINAR TF4 is approved for use on the following substrates: Hot-Dipped Galvanized (HDG), Galvalume® and Aluminum.

TRINAR TF4 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 four-coat system, composed of a topcoat over three coats of our proprietary High-Build Primer.

### Field Performance

When applied in accordance to specifications the following field performance can be expected from TRINAR TF4.

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

### TRINAR TF4 COOL CHEMISTRY® Series

TRINAR TF4 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.

**1.800.294.3361**

Mailing Address:  
PO Box 489  
Columbus, OH 43216

Physical Address:  
1313 Windsor Ave.  
Columbus, OH 43211

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

## Application Characteristics

<b>Film Thickness</b>	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; Top-coat (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 = 3.70 – 4.10 mils. All measurements per ASTM D 1005 or D 5796.
<b>Topside Color</b>	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

<b>Specular Gloss</b>	25% - 35%. Determined per ASTM D 523 at a glossmeter angle of 60°.
<b>Pencil Hardness</b>	Minimum pencil hardness, per ASTM D 3363, is "HB".
<b>Solvent Resistance</b>	Passes minimum of 100 double rubs of a MEK soaked cloth, per ASTM D 5402.
<b>Cross-Hatch Adhesion</b>	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.
<b>Impact Resistance</b>	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.
<b>T-Bend Adhesion</b>	Per ASTM D 4145, no loss of adhesion when taped with Scotch #610 cellophane tape when subjected to a 2T-Bend.

## Testing Data

<b>Humidity Resistance</b>	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.
<b>Cleveland Condensing</b>	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.
<b>Water Immersion Resistance</b>	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.
<b>Salt Spray Resistance</b>	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".
<b>Chemical Resistance</b>	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).
<b>Kesternich Test</b>	No significant color change after 10 cycles in a SO <sub>2</sub> chamber, per ASTM G 87.
<b>Accelerated Weathering</b>	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.
<b>Exterior Weathering</b>	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.
<b>Abrasion Resistance</b>	Per ASTM D 968, Method A, TRINAR passes 250 +/- 20 liters minimum of falling sand.
<b>Flame Spread Rating</b>	TRINAR displays a flame spread classification of A (Class 1) when tested in accordance with ASTM E 84.



[www.akzonobel.com/ccna](http://www.akzonobel.com/ccna)

AkzoNobel is a leading global paints and coatings company and a major producer of specialty chemicals. We supply industries and consumers worldwide with innovative products and are passionate about developing sustainable answers for our customers. Our portfolio includes well-known brands such as Dulux, Sikkens, International and Eka. Headquartered in Amsterdam, the Netherlands, we are consistently ranked as one of the leaders in the area of sustainability. With operations in more than 80 countries, our 50,000 people around the world are committed to delivering leading products and technologies to meet the growing demands of our fast-changing world.

© 2014 Akzo Nobel NV. All rights reserved.

TRINAR and COOL CHEMISTRY are registered trademarks of an Akzo Nobel company  
Revision Date: June 2014

