

The qualities of

TRINAR®

A versatile high performance PVDF coil coating system



AkzoNobel
Tomorrow's Answers Today

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

Product Information

TRINAR® is a high performance fluoropolymer coating containing a minimum of 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.

The two-coat system, using our high-performance primer, provides unparalleled protection against environmental weathering such as chalk and fade for decades. It has a tough but flexible finish, and is perfectly suited for high end residential, institutional and commercial applications. TRINAR® meets or exceeds all requirements of AAMA 620/621 and AAMA 2605.

Test samples of TRINAR® coated material have been exposed for decades at weathering facilities in South Florida and around the world, with results that prove the superiority of this system. We are constantly evaluating these test panels to ensure that only the highest quality pigmentation is used. The result is a coating system formulated for, and tested under real world conditions. Using TRINAR® coatings will ensure your project will continue to look good for many years after installation.

AkzoNobel stands behind the performance of TRINAR® and backs it up with years of research and experience. TRINAR® coatings are providing protection on all types of buildings and locations

around the globe. They have proven that they are capable of withstanding the ultraviolet rays of the sun and the degrading effects of weather extremes from the equator to the arctic.

Field Performance

TRINAR® is one component of a total paint system, when applied in accordance to specifications the following field performance can be expected.

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

General System Information

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

TRINAR® 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 two coat system, composed of a topcoat over AkzoNobel's High-Performance primer.

TRINAR® COOL CHEMISTRY® Series

TRINAR® is also available in our COOL CHEMISTRY® series which contain 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 paints 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. COOL CHEMISTRY® Series versions are available of our high performance coatings for building products.

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Application Characteristics

Film Thickness	Topside finish: Primer (dry) = 0.20 – 0.30 mils; Topcoat (dry) = 0.70 – 0.80 mils; Reverse side finish: Primer (dry) = 0.15 – 0.25 mils; Pigmented backer (dry) = 0.30 – 0.40 mils. Total DFT for system = 0.90 – 1.15 mils. All measurements per ASTM 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	Determined per ASTM D 523 at a glossmeter angle of 60°. TRINAR® systems are typically 35% ± 5%, but are available in lower gloss ranges as well.
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 after 1000 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 1000 hours 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 1000 hours, 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 60 +/- 5 liters/mil 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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AkzoNobel is proud to be one of the world's leading industrial companies. Based in Amsterdam, the Netherlands, we make and supply a wide range of paints, coatings and specialty chemicals - 2009 revenue totaled €13.0 billion. In fact, we are the largest global paints and coatings company. As a major producer of specialty chemicals we supply industries worldwide with quality ingredients for life's essentials. We think about the future, but act in the present. We're passionate about introducing new ideas and developing sustainable answers for our customers. That's why our 54,000 employees - who are based in more than 80 countries - are committed to excellence and delivering Tomorrow's Answers Today™.

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