

Product specifications of

# TRINAR® *ULTRA* TEC and TMC

Environmentally-friendly liquid spray 3-coat exotic and metallic colors for architectural extrusion applications



**AkzoNobel**

Tomorrow's Answers Today

**All TRINAR® *ULTRA* TEC and TMC coatings are formulations of 70% polyvinylidene fluoride (PVDF) resin, which makes it the best choice for monumental or institutional projects.**

Continually monitored AkzoNobel research and production quality assurance programs have produced years of actual 45° S. South Florida exposure data.

This data demonstrates TRINAR® *ULTRA* TEC and TMC's remarkable resistance to exterior weathering such as fading, color change, chalking and cracking.

Both TRINAR® *ULTRA* TEC and TMC are applied in a 3-coat process and have the unparalleled durability that only a 70% PVDF coating can provide.

TRINAR® *ULTRA* TEC is available in a broad spectrum of vibrant, bright, and very clean colors. They lend themselves beautifully to

applications requiring a striking accent or bold statement in design. TRINAR® *ULTRA* TMC metallic colors offer either a bright or subdued metal color which is very popular throughout the architectural community.

When specifying TRINAR® *ULTRA* TEC or TMC colors, it is helpful to include the appropriate suffix (TEC or TMC). This helps to distinguish the color as a 3-coat process, and minimizes any possibility for confusion during the specification process. The TEC stands for TRINAR® Exotic Clear, and the TMC stands for TRINAR® Metallic Clear.

Whether your color design requirements call for a bold statement or a soft and subtle appearance, AkzoNobel's wide array of TRINAR® *ULTRA* TEC and TMC colors will provide the desired effects. Should you wish to match a color provided by another manufacturer, our computer-aided technicians will be happy to provide you with a corresponding match. Or, if you want something not found on a color card, we will assist you in the creation of a brand new color.

TRINAR® *ULTRA* TEC and TMC have become very popular coatings for factory application on aluminum as well as galvanized metal roofing and zinc/aluminum coated steel substrates. TRINAR® *ULTRA* TEC and TMC coatings

provide long-term beauty for a wide range of metal building components such as panel systems, curtain-wall, window systems, louvers, canopies, mullions, store fronts and fascia.

#### **Why choose TRINAR® *ULTRA*?**

TRINAR® *ULTRA* is the next generation of PVDF coatings. All finish types available in TRINAR® are now available in TRINAR® *ULTRA* (2-coat colors, TRI-Escent® II, TEC and TMC). All color choices from standard TRINAR® systems are also available in the *ULTRA* series. The main benefit of using TRINAR® *ULTRA* is a more environmentally friendly product with less VOC's. Durability and performance of TRINAR® *ULTRA* is still the same, easily meeting and exceeding the AAMA 2605 specification.

#### **Disclaimer**

The information contained herein is correct to the best of our knowledge. It is offered in good faith, but not to be construed as warranties as to performance of results, since the conditions of use of our products are beyond our control. We suggest that you evaluate the information presented here and determine the suitability of our products prior to commercial scale application.

# TRINAR® *ULTRA* TEC and TMC product specifications

<b>Product Type</b>	70% polyvinylidene fluoride (PVDF) coating.
<b>Specification</b>	Meets or exceeds all AAMA 2605 specifications.
<b>Primer</b>	KY1C17839A, KA1C22454(P1) or KN1C22296(P2)
<b>Percent Solids (Package)</b>	Weight solids 49-53%, Volume solids 31-35%.
<b>Percent Solids (Reduced)</b>	Weight solids 38-40%, Volume solids 27-29%.
<b>Reduction</b>	Primer: 1-1 with Xylene. Color coat and Clear coat: 20-30% by volume of Xylene/Butyl Carbitol blend then add Butyl Carbitol as needed for flow.
<b>Viscosity</b>	Primer: 20-25 seconds #3 Zahn @ 77° F (package), 16-18 seconds on Zahn #2 @ 77° F (reduced). Topcoat: 20-23 seconds #4 Zahn @ 77° F (package), 22-25 seconds on Zahn #2 @ 77° F (reduced). Clear coat: 20-23 seconds #4 Zahn @ 77° F (package), 18-22 seconds on Zahn #2 @ 77° F (reduced).
<b>Film Thickness</b>	Primer: 1.0-2.0 wet mils, 0.2-0.4 mils dry. Color coat: 2.5-4.0 mils wet, 1.0-1.2 mils dry. Clear coat: 2.0-3.0 mils wet, 0.4-0.6 mils dry. Total system: 1.6-2.2 mils dry.
<b>Gloss Range</b>	25 to 35% @ 60° angle.
<b>Cure Schedule</b>	Lab bake cycle 10 minutes @ 450° F. Production cure varies with line speed and oven temperature. Metal temperature must achieve 450° F and be maintained for 2 minutes minimum.
<b>Cure</b>	H+ pencil hardness and 50 MEK double rubs.
<b>Note</b>	To help facilitate color uniformity, a special primer (P1 or P2) may be required. Please see Product Data Sheet.

# AAMA 2605 specification

Test	Description	Coating Requirements	TRINAR® <i>ULTRA</i> TEC and TMC Performance
7.1	<b>Color Uniformity</b>	Visual Control	Instrument and visually controlled
7.2	<b>Specular gloss at 60°, ASTM D 523</b>	Medium and low gloss ranges	Controlled to custom spec ±5 units
7.3	<b>Dry film hardness, ASTM D 3363</b>	F minimum	H+
7.4	<b>Film adhesion (dry, wet and boiling water), crosshatch 1/16 inch squares</b>	No removal between scribed times	No removal
7.5	<b>Impact resistance (direct) 0.10 inch distortion</b>	No removal of film	No removal
7.7.1	<b>Chemical resistance (10% muriatic acid)</b>	15 minutes, no visual changes	Meets or exceeds spec
7.7.2	<b>Chemical resistance (mortar, alkali)</b>	24 hours, no visual changes	Meets or exceeds spec
7.7.3	<b>Resistance to acid pollutants (70% nitric acid)</b>	30 minutes, maximum 5ΔE NBS units color change	Meets or exceeds spec
7.7.4	<b>Detergent resistance</b>	72 hours, no effect	Meets or exceeds spec
7.8.1	<b>Humidity resistance, ASTM B 2247</b>	4,000 hours, few #8 blisters (maximum)	Meets or exceeds spec
7.8.2	<b>Salt spray resistance, ASTM B 117</b>	4,000 hours, minimum 7 rating on scribe and minimum blister rating of 8 (ASTM D 1654)	Meets or exceeds spec
7.9.1.2	<b>Weathering, color retention, ASTM D 2244</b>	10 years, 45° S. South Florida, max 5ΔE NBS units color change	Meets or exceeds spec
7.9.1.3	<b>Weathering, chalk resistance, ASTM D 4214</b>	10 years, 45° S. South Florida, max 8 rating for colors, 6 rating for whites	Meets or exceeds spec
7.9.1.4	<b>Gloss retention</b>	10 years, 50% minimum	Meets or exceeds spec
7.9.1.5	<b>Weathering, erosion resistance</b>	10 years, 45° S. South Florida, maximum 20% loss	Meets or exceeds spec

For more information, please contact:

**Akzo Nobel Coatings Inc.**  
**1313 Windsor Ave.**  
**Columbus, OH 43211**  
**614.294.3361**



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

AkzoNobel is the largest 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. Headquartered in Amsterdam, the Netherlands, we are a Global Fortune 500 company and are consistently ranked as one of the leaders on the Dow Jones Sustainability Indexes. With operations in more than 80 countries, our 55,000 people around the world are committed to excellence and delivering Tomorrow's Answers Today™.

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