

Koolnar™

Product Bulletin

Premium PVDF Coil Coating
Product Bulletin: 05-100
April 24, 2021

System Overview

- Globally Available
- Complete U.S. WARRANTY SUPPORT Program
- Multi-coat and High Build System Available
- Decades of Architectural, Governmental, and Heavy Industrial Usage

The **Koolnar™** PVDF coil coating system manufactured and distributed globally by Continental Coatings Inc. and Yung Chi Paint and Varnish Manufacturing Company Ltd., is a **Premium 70% PVDF** coil coating system engineered for monumental building product applications and severe exterior environments that require long life and extended warranty coverage. The **Koolnar™** system uses premium 70% PVDF Fluoropolymer technology which is ultra resistant to U.V. radiation and natural weathering. **Koolnar™** uses only the highest quality long lasting ceramic and metallic pigmentation to insure optimal exterior color fastness and longevity. This system is also available in multiple coats and various specialty high build systems. **Koolnar™** may be applied over the Universal **PU-11 High Molecular Weight Urethane Primer** or **PU-30 High-build Urethane primer systems** for extreme environment and extra long service life warranted building product applications.

Application Parameters

The **Koolnar™** system is designed for trouble free coil coating line application and has been run for well over 2 decades on new and old coil lines around the world. Standard topcoat DFT is .70-.80 mils, which allows for optimal application consistency, color stability and exterior performance. **Koolnar™** was formulated to provide improved stain resistance and cleanability as well as scratch resistance and surface toughness. Superior primer corrosion resistance and substrate adhesion along with chemically enhanced topcoat intercoat adhesion greatly minimize field scratch and wet stack storage complaints, and handling, transporting, and storage related claims.

Commercial Uses

The **Koolnar™** system can be formulated in standard, medium, as well as low gloss/low sheen finishes and supplied in limited colors. This premium coating supports an extended warranty and can be applied to a variety of adequately cleaned and treated metal substrates including: Hot Dipped Galvanized, ZnAl, Galfan, ZAM-, Aluminum, and Stainless Steels. **Koolnar™** is formulated with IR Reflective COOL ROOF ceramic pigment technology and can be designed to meet and exceed U.S. Energy Star requirements. It is most ideal for high-end construction related products like composite panels, high U.V. exposure roofing, and acidic/alkaline corrosive environments like industrial manufacturing facilities and power plants.

Koolnar™ Coil Coating System

APPLICATION		
SPECIFICATIONS	TEST	RESULT
Application Method		Reverse Roll Coat
Substrate		Aluminum, HDG, Galvalume®, Galfan®, ZAM®
Pretreatment	Standard clean and treat	Chrome or approved non-chrome
ASTM D 4138	Dry Film Thickness	Top coat: 0.7 to 0.8 mils Primer: 0.2 to 0.3 mils Total system: 0.9 to 1.1 mils
ASTM D 4212	Viscosity (No. 2 Zahn cup)	25 to 45 seconds
ASTM D 1475	Weight Per Gallon	9.0 to 12.0 pounds per gallon
ASTM D 2697	Solids Per Volume	35 to 42%
ASTM D 2369	Solids Per Weight	45 to 65%
Reducing Thinner	Reducing Solvent	Isophorone / DBE
ASTM D 3960	VOC (Theoretical)	4.0 to 4.8 pounds per gallon
Clean-up Solvent		Aromatic/Ketone
Peak Metal Temperature		465 to 485 F
TECHNICAL DATA		
SPECIFICATIONS	TEST	RESULT
ASTM D 523	Specular Gloss at 60	6 to 35
ASTM D 3363	Pencil Hardness	F to 2H
ASTM D 4145	T-Bend	1T to 4T with no loss of adhesion
ASTM D 3359	Cross Hatch Adhesion	No loss of adhesion
ASTM D 2794	Reverse Impact	Galvalume or HDG: 3x metal thickness inch-pounds, no loss of adhesion Aluminum: 1.5x metal thickness inch-pounds, no loss of adhesion
ASTM D 2247	Humidity Resistance 1,000 hrs. Humidity Resistance 3,000 hrs.	Galvalume or HDG: Creep from scribe < 1/8 inch (3mm), no field blistering Aluminum: Creep from scribe < Creep from scribe < 1/8 inch (3mm), no field blistering
ASTM B 117	Salt Spray Resistance 1,000 hrs. Salt Spray Resistance 3,000 hrs.	Galvalume or HDG: No Blistering Aluminum: < 1/16 inch (2mm) none or few #8 blisters
ASTM D 2244 ASTM D 4214	South Florida Exposure	Color: No more than 5 Hunter (E) units Chalk: Rating no less than 8
ASTM D 870	Water Immersion 100 F 500 hrs.	No Field blisters with minimal color change
ASTM D 1308	Chemical Resistance (15 mins.)	No significant color change
ASTM E 84	Flame Spread Classification	Class I or A
ASTM D 968	Abrasion Resistance	Total Sand = 65 +/- 5 (Dft dependent)
AAMA 2605-20	FGIA Voluntary Specification	Meets or exceeds all performance specifications

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