

Where cool meets color



PPG DURANAR®  
cool-technology coil coatings



We protect and beautify the world™





Emma & Georgina Bloomberg  
Center at Cornell Tech  
*Duranar VARI-Cool Coatings*

## Tough, colorful technology that keeps buildings cool

PPG *Duranar* fluoropolymer cool metal coil coatings are premium infrared-reflective (IR), multi-coat systems available in pre-formulated or custom colors. These coatings offer architects and building designers a wide palette of unique looks and color options – all while meeting cool roof requirements for LEED®, ENERGY STAR®, Title 24 and ASHRAE 90.1.

### The PPG Benefit

- IR-reflectivity can help to reduce energy consumption associated with air-conditioning systems
- Cooler interior spaces improve comfort levels for building occupants
- Reduced expansion and contraction can help increase life of roofs
- Wide color palette, including dark and bright colors
- Numerous colors listed with Cool Roof Rating Council (CRRC) and *Energy Star*
- Excellent color stability and gloss retention
- Exceptional abrasion and chemical resistance
- Good film flexibility

### Suggested markets

Building products





## Duramar cool-technology coil coating products

### PPG Duramar® ULTRA-Cool®

#### Duramar ULTRA-COOL® Coil Coating System

This tough, multi-layer system delivers outstanding aesthetics, durability and long-term infrared reflectivity in a wide range of applications. Engineered to comply with *Energy Star* solar reflectance limits for steep-slope or low-slope roofing products, *Duramar ULTRA-Cool* coil coatings are available in a palette of light, medium and dark colors, creating a multitude of design options for architects and designers.

### PPG Duramar® VARI-Cool®

#### Duramar VARI-COOL® Coil Coating System

Building on PPG's energy-saving *ULTRA-Cool* technology, *Duramar VARI-Cool* pearlescent coatings offer outstanding durability, color-fastness and gloss retention — but, with a twist. Produced with special-effect pigment particles, the *Duramar VARI-Cool* multi-coat system subtly shifts in color depending on both the viewing angle and how light refracts on the surface. The result offers brilliant, polychromatic color shifts that captivate and fascinate.



**Bandon Dunes Golf Resort**  
*Duramar ULTRA-Cool Coatings*

#### Suggested end uses

Roof and exterior wall panels

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Roof and exterior wall panels

Aluminum composite and accent trim

Corporate signage



**Appaloosa Library**  
*Duramar VARI-Cool Coatings*

## Duranar cool-technology coil coating products

Characteristics and performance apply to both *Duranar ULTRA-Cool* and *Duranar VARI-Cool* coating systems.



Product Characteristics	Test Standard	Aluminum	Coated Steel <sup>1</sup>
Dry Film Thickness	ASTM D1400	<i>Duranar ULTRA-Cool</i> : 0.15-0.30 mil primer / 0.70-0.90 mil topcoat <i>Duranar VARI-Cool</i> : 0.20 mil primer / 0.70-0.80 mil topcoat	
Gloss	ASTM D523 @ 60°	25 - 35	25 - 35

Performance Properties <sup>2</sup>	Test Standard	Aluminum	Coated Steel <sup>1</sup>
Solar Reflectance (Steep Slope / Low Slope)	ASTM E903	> 25% initial; >15% after 3 years > 65% initial; >50% after 3 years	> 25% initial; >15% after 3 years > 65% initial; >50% after 3 years
Emissivity	ASTM C1371 E408	0.80 (80%) minutes	0.80 (80%) minutes
Pencil Hardness	ASTM D3363	F - 2H	F - 2H
Flexibility (T-Bend) <sup>2</sup>	ASTM 4145	0 - 2 T-bend; no pick-off	0 - 2 T-bend; no pick-off
Adhesion	ASTM D3359	No adhesion loss	No adhesion loss
Abrasion (Falling Sand)	ASTM D968	65-85 l/mil	65-85 l/mil
Mortar Resistance	ASTM C267	No effect	No effect
Detergent Resistance	ASTM D2248 3% detergent @ 100°F (38° C), 72 hours	No effect	No effect
Acid Resistance	ASTM D1308 10% muriatic acid - 24 hours 20% sulfuric acid - 18 hours	No effect No effect	No effect No effect
Acid Rain Test	Kesternich SO <sub>2</sub> , DIN 50018	15 cycles minimum No objectionable change	15 cycles minimum No objectionable change
Alkali Resistance	ASTM D1308 10%, 25% NaOH, 1 hour	No effect	No effect
Salt Spray Resistance	ASTM B117 5% salt fog @ 95° F (35° C)	No face blistering; Max. average 1/16" scribe creep Passes 4,000 hours	None or few #8 blisters; Max. average 1/16" scribe creep Passes 1,000 hours
Humidity Resistance	ASTM D714, ASTM D2247, 100% relative humidity @ 95° F (35° C)	Passes 4,000 hours None or few #8 blisters	Passes 1,500 hours None or few #8 blisters
Exterior Exposure	ASTM D2244, ASTM D4214 10 Years @ 45°, South Florida	Maximum 5 fade Maximum 8 chalk	Maximum 5 fade Maximum 8 chalk

<sup>1</sup> Coated steel includes G90 hot-dip galvanized, GALVALUME® and ZINCALUME® substrates.

<sup>2</sup> Fracturing or rupturing of substrate will rupture coatings. Heavy-gauge and clad steel substrates impose limitations on formability.

Shown:

**Appaloosa Library**  
Scottsdale, AZ

Photos by Timmerman Photography

**Bandon Dunes Golf Resort**  
Bandon, OR

Photo by Steve Wanke

**Emma & Georgina Bloomberg**  
Center at Cornell Tech

Roosevelt Island, NY  
Photos by Matthew Carbone

**Port Pavilion on Broadway Pier**  
San Diego, CA

Photo by Zack Benson

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