PPG Coil Coatings

DURANAR® XL PLUS COATINGS

PRODUCT DATA

PRODUCT DESCRIPTION

DURANAR XL PLUS fluoropolymer coil coatings are three-coat systems based on a patented PPG urethane primer that imparts exceptional adhesion as well as providing excellent abrasion resistance, maximum flexibility, chemical resistance, and barrier corrosion protection. The coatings are designed for use directly over pretreated steel and can be used on aluminum substrates. These enhancements make DURANAR XL PLUS the best choice for projects that must withstand highly aggressive industrial and seacoast environments.

More than 15 years of field use have proven them to be the standard of excellence in architectural fluoropolymer finishes. DURANAR XL PLUS coil coatings combine PPG proprietary resin and pigment technologies with 70% of the resin system being fluoropolymer base resins. The coatings are exceptionally flexible and highly resistant to abrasion, chalking, fading, chipping, and peeling when properly applied by an approved applicator. DURANAR XL PLUS coil coatings meet or exceed AAMA 620/621 and the performance requirements (section 7) of American Architectural Manufacturers Association (AAMA) 2605-05 Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels. They are approved for use on aluminum and properly cleaned and coated steel substrates such as G90 hot dip galvanized, Galfan®, Galvalume®, and Zincalume®*. They are not intended for use on hot or cold rolled steel substrates for exterior exposure applications.

DURANAR LG, a low luster, matte clear coat finish for DURANAR XL PLUS coil coating formulations, is also available for use where nonglare is required or desired, such as for airport, government, and military applications. DURANAR LG provides a unique appearance that is functional and aesthetically appealing. Its low-luster reflectance provides a smoother appearance to walls or roof panels, and it is available in any color in which DURANAR XL PLUS coil coatings are offered.

SYSTEM OVERVIEW

DURANAR XL PLUS coatings are three-coat systems consisting of a nominal 0.8 mils each of a proprietary urethane primer, fluoropolymer color coat, and a clear topcoat to seal and protect the entire system. The total film thickness is 2.25-2.55 mils. The DURANAR XL PLUS system also provides excellent flexibility to inhibit corrosion on substrate bends. Testing has shown no cracking or tape removal of the film on 0 T-bends**. Consequently, DURANAR XL PLUS coatings are ideal for applications requiring high flexibility plus abrasion and corrosion resistance. They are available in a wide range of consistent, stable colors and are extremely inert, providing long-term durability as well as resistance to chemical attack and surface damage caused by acid rain, salt spray, and humidity encountered under highly environmental conditions. DURANAR XL PLUS coil coatings require minimal maintenance and minor scratches can be repaired in the field.

COMMERCIAL USES

DURANAR XL PLUS coil coatings are formulated to provide optimum performance against weathering in highly aggressive environments such as industrial and seacoast areas where maximum protection against chemical and salt spray corrosion is required. The DURANAR XL PLUS three-coat system is an excellent choice for industrial and architectural applications such as chlorine rooms, sewage treatment facilities, power plants, and paper mills.

DURABILITY

DURANAR XL PLUS coil coatings are chemically inert and provide maximum resistance to abrasion, color and gloss fade, and environmental stress including acid rain, corrosive chemicals, and ultraviolet attack. The coatings require very little maintenance, and most surface contaminants may be removed by conventional detergents or cleaning solvents. (Harsh chemicals or solvents should not be used on DURANAR XL PLUS coated surfaces.) All pigments are tested for a minimum of ten years in south Florida prior to approval for use in any DURANAR XL PLUS coil coating system. Additionally, DURANAR XL PLUS coil coatings are tested at exposure sites throughout the world in all types of climatic and industrial conditions to ensure the coatings' performance and durability.

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DURANAR XL PLUS SPECIFICATIONS		
	Aluminum Substrate	**Coated Steel[1] Substrate**
Dry Film Thickness (nominal) ASTM D1400	0.80 mil primer 0.80 mil topcoat 0.80 mil clear topcoat	0.80 mil primer 0.80 mil topcoat 0.80 mil clear topcoat
Gloss ASTM D523 Standard @ 60° DURANAR LG @ 85°	 25 - 35 <10	 25 - 35 <10
Pencil Hardness ASTM D3363	HB - H	HB - H
Flexibility[2] T-bend, ASTM D4145	0 T-bend; No pick-off	0 T-bend; No pick-off
Adhesion ASTM D3359 Reverse impact 1/16" crosshatch	No adhesion loss	No adhesion loss
Reverse Impact ASTM D2794 1500 x metal thickness (aluminum) 3000 x metal thickness (coated steel)	 No cracking or adhesion loss No cracking or adhesion loss	 No cracking or adhesion loss No cracking or adhesion loss
Acid Resistance ASTM D1308 10% muriatic acid — 24 hrs. 20% sulfuric acid — 18 hrs.	 No effect No effect	 No effect No effect
Acid Rain Test Kesternich SO_2, DIN 50018	30 cycles min. No objectionable color change	30 cycles min. No objectionable color change
Alkali Resistance ASTM D1308 10%, 25% NaOH, 1 hr.	No effect	No effect
Salt Spray Resistance ASTM B117 5% salt fog @ 95°F	Passes 4000 hrs. Less than 1/16" avg. creepage from scribe; None or few #8 blisters	Passes 1000 hrs. Less than 1/8" avg. creepage from scribe; None or few #8 blisters
Humidity Resistance ASTM D714, ASTM D2247 100% relative humidity @ 95°F	Passes 4000 hrs. No #8 blisters	Passes 1500 hrs. No #8 blisters
Exterior Exposure 10 yrs. @ 45°, south Florida ASTM D2244 ASTM D4214	 Max. 5 fade Max. 8 chalk	 Max. 5 fade Max. 8 chalk

[1] Coated Steel includes the following types of steel: G90 hot dip galvanized, Galfan, Galvalume, and Zincalume.

[2] Fracturing or rupturing of substrate will rupture coatings. Heavy gauge and clad steel substrates impose limitations on formability. DURANAR XL PLUS coatings are generally flexible beyond the point of substrate rupture.

DURANAR XL PLUS WARRANTY INFORMATION

PPG offers a comprehensive warranty on DURANAR XL PLUS coil coatings. For complete warranty information and a copy of the DURANAR XL PLUS coil coatings warranty, please call PPG at **1-800-258-6398**.

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