

PPG Coil and Building Product Coatings Revised: January 2, 2018

PPG Coil & Extrusion Coatings

Excellence in Coating Metal For More Than a Century

Since its founding in 1883, PPG has grown to become a multi-billion dollar global corporation and a leading manufacturer of industrial, automotive, aerospace and packaging coatings. Today, the company has more than **160** manufacturing facilities and equity affiliates in **70** countries and employs more than **46,000** people.

PPG's Coil and Extrusion Coatings business is a full-service organization offering coatings selection assistance, color matching, electronic color services, the industry's largest color database, remote diagnostic capabilities and immediate access to product information via **ppgmetalcoatings.com**.

We offer coil and extrusion coatings in a wide range of applications: DURANAR®, DURANAR ULTRA-COOL®, DURANAR VARI-COOL®, CORAFLON® and ACRYNAR® fluoropolymer coatings, DURACRON® acrylics, POLYCRON®, DURASTAR®, DURAFORM® and MACROFLEX ™ polyesters, *Durastar ULTRA-Cool* silicone-polyester and ENVIRON® waterborne coatings. PPG's computer-controlled KALEIDOSCOPE™ workcell coatings manufacturing technology is available to provide short lead times and minimal batch-to-batch variability.

In addition, PPG is proud to offer a complete line of ENVIROCRON® polyesters and *Duranar* and *Coraflon* fluoropolymer extrusion powder coatings, which are designed to meet American Architectural Manufacturers Association (AAMA) 2603, AAMA 2604, and AAMA 2605 specifications. For more information, please contact **1-800-258-6398**.

PPG Certified Applicator Program Superior Quality Products, World Class Service and Technical Expertise

Are you facing a tight construction deadline or working on a project that demands the very best in high-performance coatings? If so, the PPG CERTIFIED APPLICATOR PROGRAM® (PPG/CAP) can help.

PPG/CAP members are part of a select group of exceptional coating applicators fully capable of delivering high-performance coated aluminum products by applying coatings such as *Duranar*, *Coraflon* and *Acrynar* fluoropolymers on time to meet demanding construction schedules.

Their facilities and quality control processes are rigorously audited to help achieve color consistency and deliver the highest possible level of product quality, customer service and technical expertise.

In addition to enhanced coating consistency and quality, PPG/CAP members provide a heightened level of customer service, typified by the following benefits:

- Annual Paint Line Audits
- Bi-Annual AAMA Testing
- Priority Service on Color-Matching and Samples
- Major Project Assistance

- Education and Training
- Access to the World's Largest Color Database

PPG Aluminum Extrusion Coatings

<u>Liquid</u> <u>Powder</u>

AAMA 2605 Coatings

DURANAR® - 70% PVDF Solids

DURANAR® Powder - 70% PVDF

- DURANAR® SUNSTORM® Micas
- **CORAFLON® Powder FEVE Solids**
- DURANAR® XL Metallics with Clear CORAFLON® SUNSTORM® Powder–FEVE Micas
- DURANAR® XLB Metallic with Barrier Coat
- DURANAR® LG Low Gloss
- DURANAR® GR Graffiti-Resistant

AAMA 2604 Coatings

• ACRYNAR® 50% PVDF

ENVIROCRON® 04 - Ultra-durable Polyester

• DURASTAR® Ultra-durable Polyester

AAMA 2603 Coatings

• DURACRON® Acrylics

ENVIROCRON® 03 – Durable Polyester

- POLYCRON® High Solid Polyesters
- MACROFLEX™ Flexible Post-Forming

PPG Coil Coatings-Building Products

70% PVDF Fluoropolymer Coatings

- DURANAR® 70% PVDF Solids
- DURANAR® SUNSTORM® Micas
- DURANAR® XL Metallics with Clear
- DURANAR® XLB Metallic with Barrier Coat
- DURANAR® MXL Mica in the Clear Coat
- DURANAR® ULTRA-COOL® IR-Reflective
- DURANAR® PLUS Thick Film Primer over Steel
- DURANAR® XL PLUS Thick Film Primer with Clear Coat
- DURANAR® VARI-COOL® Color Shifting
- DURANAR® LG Low-Gloss
- DURANAR® GR Graffiti-Resistant

FEVE Fluoropolymer Coatings

- CORAFLON® XL Clear Coat with Medium to High-Gloss
- CORAFLON® MXL Micas in the Clear Coat
- CORAFLON® GR Graffiti-Resistant
- DURABRITE® Clear and Tinted Clear over Brushed Aluminum

Polyester

- DURAFORM® BP Polyester Building Product
- DURASTAR® Ultra-durable Polyester
- DURASTAR® ULTRA COOL® Reflective Polyester

Acrylics

• ENVIRON® - Water-Based Acrylic

Plastisol

• PLASTICRON® – High Build & Striated Plastisol

PPG Coil Coatings – Industrial Products

Acrylics

• DURACRON® - Acrylic

Polyesters

- DURAFORM® AP Appliance
- DURAFORM® CP Consumer Products
- DURAFORM® DR Door
- DURAFORM® HV Heating, Ventilating and Air-Conditioning
- DURAFORM® LF Lighting Fixture
- DURAFORM® TR Transportation

Touch-Up and Refurbish Coatings

- DURANAR® ADS Air-Dry PVDF
- CORAFLON® ADS Air-Dry FEVE
- DURACRYL® Air-Dry Acrylic Lacquer

EXTRUSION PRODUCT DESCRIPTIONS

Liquid Coatings

AAMA 2605 Coatings

DURANAR® 70% PVDF Solid Extrusion Coatings

Duranar fluoropolymer extrusion coatings are AAMA 2605-approved two-coat systems consisting of a patented primer and a durable color coat that combines PPG proprietary resin and pigment technologies with 70% PVDF resin. For 50 years, *Duranar* liquid extrusion coatings have demonstrated exceptional resistance to chalking, fading, chipping, peeling, dirt collection and chemical staining when properly applied on exterior aluminum surfaces.

DURANAR® SUNSTORM® Mica Coatings

Duranar Sunstorm fluoropolymer extrusion coatings feature the same technology as conventional Duranar two-coat extrusion coating systems with the addition of mica pearlescent flakes to the durable color coat layer, which enables them to achieve a metalescent look without aluminum flake and a clear topcoat.

DURANAR® XL Metallic Coatings

Consisting of a patented primer, a durable color coat, and clear top coat (three-coat system) or a patented primer, barrier coat, durable color coat, and clear top coat (four-coat system), *Duranar* XL coatings provide exceptional aesthetics and durability in aggressive seacoast and industrial environments. Added layers of protection enable *Duranar* XL coatings to resist abrasion and retain gloss and color after long-term exposure to atmospheric contaminants such as acid rain. The addition of a clear coat enhances the UV-resistance of the coating to prevent chalk and maintain color over the lifetime of the finish.

DURANAR® XLB Coatings

Duranar® XLB coatings are four-layer systems that incorporate a primer, barrier coat, color coat and clear coat. The barrier coat protects the primer from UV exposure on colors that may not have sufficient hiding power and provides a background for consistent color-matching.

DURANAR® LG (Low-Gloss) Coatings

Duranar LG extrusion coatings feature low-luster, matte finishes for applications where non-glare characteristics are desired, such as airport, government and military buildings. Available in any *Duranar* coatings color, these specialty coatings create a smooth, clean appearance on metal roof and wall panels.

DURANAR GR (Graffiti-Resistant) Coatings

Duranar GR coating is a factory-applied clear coat applied over the pigmented layer of extruded architectural metal. In addition to providing a graffiti-resistant barrier that can be wiped clean with DURAPREP® Prep 400 graffiti-remover by PPG, the coating provides excellent resistance to abrasion, chalking, fading, chipping and peeling, even in tough seacoast and industrial environments.

AAMA 2604 Coatings

ACRYNAR® Coatings 50% PVDF Extrusion Coatings

Acrynar durable fluoropolymer spray coatings represent a new level of performance for architectural applications. This two-coat system has proven, painter-friendly application properties and its proprietary resin technology and formulation produces hard, smooth finishes.

Acrynar coatings' combination of long-term durability, exceptional mar resistance and excellent weatherability make them ideal for high-traffic areas such as storefronts, schools, hospitals and high-rise condominiums. (Acrynar acrylic coatings meet the AAMA 2604 specification and are not a replacement for Duranar fluoropolymer coatings, which meet the AAMA 2605 specification.)

DURASTAR® Polyester Extrusion Coatings

Durastar ultradurable polyester coatings, a solid performer in PPG's coil product line for more than 15 years, are now available as spray-applied products. Formulated in low to very high gloss options, Durastar coatings offer excellent protection against abrasion and scratching, creating a hard, lower-cost alternative to fluoropolymer coatings for AAMA 2604-type one-coat direct-to-aluminum finishes. Durastar coatings are not recommended for seacoast and other harsh environments, where Acrynar coatings remain the preferred choice.

AAMA 2603 Coatings

DURACRON® Acrylic Extrusion Coatings

Duracron extrusion coatings, the first aluminum extrusion coatings offered by PPG more than 40 years ago, are acrylic-based one-coat systems. With decades of field-proven performance, they meet AAMA 2603 specifications and offer good film integrity, color control and mar resistance.

Recommended for residential or interior applications such as window and door frames, railings and trim, *Duracron* extrusion coatings can be custom-formulated to match most *Duranar* and *Acrynar* colors. They are not recommended for use on monumental buildings or high-rise curtainwalls.

POLYCRON® Polyester High-Solids Extrusion Coatings

Polycron polyester-based coatings are one-coat systems recommended for residential or interior architectural applications such as window and door frames, railings and trim. Their high-solids polyester resin technology enables them to meet increased restrictions on volatile organic compound (VOC) emissions while fulfilling AAMA 2603 performance specifications.

Polycron coatings can be applied over inhibitive primers to enhance corrosion resistance and they are formulated to match and complement most *Duranar* and *Acrynar* coatings colors. Although *Polycron* coatings offer good film integrity, color control and mar resistance, they are not recommended for exterior use on monumental buildings or high-rise curtainwalls.

MACROFLEX™ Flexible Polyester Extrusion Coatings

Macroflex coatings are flexible polyester extrusion coatings formulated specially for the recreational vehicle market when post-forming is required. They exhibit good mar and burnish resistance and provide excellent flexibility.

Powder Coatings

AAMA 2605 Coatings

DURANAR® 70% PVDF Fluoropolymer Extrusion Powder Coatings

Environmentally friendly *Duranar* fluoropolymer powder coatings provide harder surfaces that are extremely resistant to damage during fabrication, shipping, installation and use. A patented manufacturing process enables *Duranar* powder coatings to be produced economically in small batches of standard and custom colors for individual building projects. These products are always applied over a primer, which combined with their exceptional durability, makes them the best choice for harsh seacoast and industrial environments.

CORAFLON® FEVE Fluoropolymer Extrusion Powder Coatings

Coraflon fluoropolymer powder coatings combine the benefits of one-coat capability with high gloss, outstanding color retention and superior chalk resistance for multiple end-use applications such as extrusions, storefronts, fencing, doors, window frames, railings and light poles. For severe environments, *Coraflon* powder coatings should be applied over a liquid or powder primer.

CORAFLON® SUNSTORM® Coatings

Based upon durability-proven FEVE fluoropolymer chemistry, *Coraflon Sunstorm* extrusion powder coatings incorporate mica flake to give metal panels and other coated components a sparkling metalescent appearance, along with outstanding color and gloss retention and resistance to chalk, fade, corrosion and chemical attack.

AAMA 2604 Coatings

ENVIROCRON® 04 Ultra-durable Polyester Extrusion Powder Coatings

Envirocron 04 ultra-durable extrusion powder coatings are engineered for excellent exterior color and gloss retention for window and door frames, fencing and other light commercial applications. With virtually no volatile organic compound (VOC) emissions, these coatings provide excellent and environmentally friendly chemical, corrosion and humidity resistance, and meet AAMA 2604 performance specifications.

AAMA 2603 Coatings

ENVIROCRON® 03 Durable Polyester Extrusion Coatings

Envirocron 03 durable powder coatings meet AAMA 2603 specifications and are used in residential and interior applications.

COIL PRODUCT DESCRIPTIONS

Building Products

DURANAR® Fluoropolymer Coatings

DURANAR® 70% PVDF Fluoropolymer Coil Coatings

Duranar fluoropolymer coil coatings deliver outstanding aesthetics and durability in an array of highend architectural applications such as curtainwalls and storefronts. For the past 50 years, these coatings have set the standard for excellence in architectural fluoropolymer finishes with their proven resistance to color and fade, to environmental stresses as acid rain and ultraviolet attack, and to chalking chipping and peeling. All *Duranar* coil coatings meet or exceed AAMA 2605 performance requirements.

DURANAR® SUNSTORM® Mica Coatings

Duranar Sunstorm coatings feature the same two-coat application as conventional Duranar coatings, adding mica pearlescent flake to the color layer to create a dazzling metalescent look without the need for aluminum flake and a third-layer clear coat. Duranar Sunstorm coatings also can be formulated with PPG's proprietary ULTRA-COOL® infrared (IR)-reflective coating technology to make buildings cooler, more comfortable and more energy-efficient.

DURANAR® XL Metallic Coatings

Available in three- and four-coat formulations, *Duranar* XL coatings provide added protection of metal roof, wall panels and architectural components in difficult seacoast and industrial environments. In addition to supplying outstanding color and gloss retention, *Duranar* XL coatings combat hazards such as acid rain, chemicals and corrosive materials, as well as chalking, fading, abrasion and peeling.

DURANAR® XLB Coatings

Duranar® XLB coatings are four-layer systems that incorporate a primer, barrier coat, color coat and clear coat. The barrier coat protects the primer from UV exposure on colors that may not have sufficient hiding power and provides a background for consistent color-matching.

DURANAR® MXL Coatings

Duranar MXL coatings are special-effect coatings featuring mica in the clear coat instead of the color coat for enhanced sparkle and brilliance, especially in direct sunlight.

DURANAR® ULTRA-Cool Coil Coatings

Duranar ULTRA-Cool infrared-reflective (IR) coatings are multi-layer systems designed to deliver outstanding aesthetics, durability and long-term IR-reflectivity in a wide range of applications.

Engineered to comply with ENERGY STAR® solar reflectance limits for steep-slope or low-slope roofing products, the cooling effects of *Duranar ULTRA-Cool* coatings offer benefits including reduced airconditioning costs for commercial and residential buildings, less product expansion and contraction, and improved comfort for building occupants.

Available in a palette of light, medium and dark colors, *Duranar ULTRA-Cool* coatings create a multitude of design options for architects and designers.

DURANAR® Plus Coil Coatings

Duranar Plus coil coatings are two-coat, thick-film primer systems that achieve outstanding aesthetics and durability over steel on a wide range of architectural components exposed to aggressive

environmental conditions. They are ideal for applications requiring maximum flexibility and advanced abrasion and corrosion resistance. The coating systems provide economical protection of metal building components because they require only one pass through a tandem coil-coating line.

DURANAR® XL Plus Coil Coatings

Duranar XL Plus coil coatings are three-coat systems for use over steel substrates that incorporate a thick film primer and clear coat. Based on a patented PPG urethane primer that imparts exceptional adhesion, abrasion and chemical resistance, flexibility, and barrier-corrosion protection, *Duranar* XL Plus coatings are the best option for building components that must endure highly aggressive industrial and seacoast environments.

DURANAR® VARI-COOL® Coil Coatings

Duranar VARI-Cool coil coatings are multi-coat systems that offer brilliant color shifts and unique looks. They are the only coil-formed polychromatic coatings that integrate PPG's energy-saving *ULTRA-Cool* technology.

DURANAR® LG (Low-Gloss) Coatings

Duranar LG coil coatings feature low-luster, matte finishes for applications where non-glare characteristics are desired, such as for airport, government, and military buildings. Available in any *Duranar* coatings color, these specialty coatings are favored for their ability to impart a smooth appearance to metal roof and wall panels.

DURANAR® GR (Graffiti-Resistant) Coating

Duranar GR coatings are factory-applied coil coatings that act as a graffiti-resistant barrier over the pigmented color coat in multi-layer coating systems. Metal panels, roofs and other components marred with graffiti, paint and other markings can be wiped clean with DURAPREP® Prep 400 graffiti-remover by PPG. As with other products in the family, *Duranar* GR coatings provide excellent resistance to abrasion, chalking, fading, chipping, and peeling in challenging seacoast and industrial environments.

CORAFLON® Fluoropolymer Coatings

CORAFLON® Clear Coats

Coraflon clear coats can be directly applied over a *Duranar* coatings color coat to provide high gloss, added hardness and mar resistance. The FEVE fluoropolymers in *Coraflon* coatings exhibit the same proven UV durability as the traditional PVDF resin technologies used in *Duranar* coatings.

CORAFLON® MXL (Mica Clear Coat) Coatings

Coraflon MXL coatings are special-effect coatings that add sparkle and brilliance to metal finishes by incorporating mica in the clear coat rather than the color coat, enhancing the mica and making it more distinct. Coraflon MXL coatings also can be formulated at high gloss levels not achievable with conventional PVDF fluoropolymers.

CORAFLON® GR (Graffiti-Resistant) Coatings

Coraflon GR clear coats perform as high-gloss topcoats over the pigmented color finish of multi-layer coating systems. When marred with paint, tar, scuff marks, tape residue and other substances, Coraflon GR coatings can be wiped with DURAPREP® Prep 400 graffiti-remover to restore the original appearance of metal building panels and other architectural components.

DURABRITE® Coatings

Durabrite coatings are FEVE fluoropolymer-based clear coats that can be applied directly to aluminum to achieve gloss of up to 85 degrees or more. In most cases, the aluminum is brushed to obtain a uniform surface that is very appealing to the eye.

DURABRITE® T Coatings

Durabrite T coatings are FEVE-based fluoropolymer coatings applied directly over brushed aluminum. Available in a wide gloss range, these coating systems are transparent and tinted to simulate stainless steel, bronzes, golds and other effects to simulate natural metals and anodized aluminum. Durabrite T coatings are not recommended for seacoast environments because they do not have the protection of a primer layer.

Polyester Coatings

DURAFORM® BP (Building Product) Coatings

Designed for one-coat application over aluminum or two-coat application over aluminum or hot-dipped galvanized steel, *Duraform* BP coating is formulated with PPG's proprietary polyester polymer to enhance forming flexibility and increase resistance to color fading, chalk, dirt and stains. The coating is available in a wide palette of colors in high, medium and low glosses, and it offers more processing flexibility than conventional polyester coatings because of its wide cure parameters and excellent flow characteristics.

DURASTAR® Coil Coatings

Durastar ultradurable polyester coil coatings have been developed to meet the high exterior durability requirements of agricultural, industrial and pre-engineered buildings. They are designed for one- or two-coat application on aluminum substrates and two-coat application on steel substrates.

With improved flexibility, these coatings are well-suited for roll-forming multiple building panel profiles, supplemented by improved scratch and mar resistance and no gloss restrictions.

DURASTAR® ULTRA-COOL® Coatings

Based on proprietary resin technology and an exclusive coatings formulation process, *Durastar ULTRA-Cool* coatings deliver a cost-effective blend of exceptional exterior durability and PPG's proprietary infrared (IR)-reflective cool coating technology. They are a superior option for metal siding, roofing and other building components requiring an optimized balance of exterior gloss retention, chalk and fade resistance, and forming flexibility.

Acrylics

ENVIRON® Waterborne Coil Coatings

Environ waterborne coil coating systems are designed for a wide range of aluminum building components. As two-coat, 1-mil total thickness coatings composed of a low-bake waterborne primer and waterborne topcoat, *Environ* coatings offer significant advantages to end users and coil coaters, due to their excellent adhesion and resistance to water staining and softening.

The proprietary chemistry used in *Environ* coatings creates an environmentally friendly combination of highly durable resin and pigment technologies.

Plastisol Coatings

PLASTICRON® Coatings

Plasticron plastisol-based coil coatings are engineered for two-coat application on industrial and preengineered buildings requiring high levels of durability and ultraviolet (UV) resistance. Typical applications include building panels, trim coil, siding, awnings, soffit and fascia, air-conditioning ducts, exterior door panels and similar components.

Industrial Coatings

Acrylic Coatings

DURACRON® Coil Coatings

Based on nearly 40 years of proven technology, *Duracron* one-coat, acrylic coil-coating systems provide long-term durability plus exceptional smoothness, depth of image and easily-cleaned surfaces.

Combining good hardness with excellent resistance to chemical attack, dirt and staining, *Duracron* coatings can be used on aluminum and steel substrates for applications such as truck trailer sheet, mobile home and RV stock, awnings, canopies and metal building products.

Polyester Coatings

DURAFORM® AP (Appliance) Coatings

Duraform AP coatings are polyester-based products engineered to meet specifications for refrigeration, laundry, cooking ranges and other appliances. Combining good hardness and flexibility with excellent resistance to chemical attack and staining, *Duraform* AP coatings have exceptionally smooth finishes that yield excellent surface-critical coatings layers. PPG makes *Duraform* AP coil coatings in a wide range of colors and metallics for specialty applications. Their outstanding flow and appearance characteristics and proven, coater-friendly application properties make them a favorite with applicators and end-users alike. Lead and chrome -free formulations are available to achieve RoHS compliance.

DURAFORM® CP (Consumer Products) Coatings

Duraform CP coatings are a universal product line that covers multiple end uses, such as electrical busways, that offers good all-around properties for roll-forming metal from coil stock.

DURAFORM® DR (Door) Coatings

Duraform DR polyester-based coatings meet all requirements of the garage and entry door market, and feature the excellent forming, embossing and stamping characteristics commonly needed by door manufacturers to create textured surfaces.

DURAFORM® HV (Heating, Ventilating and Air-Conditioning) Coatings

Duraform HV polyester-based coil coatings are formulated for corrosion and abrasion resistance, hardness and forming capability for application to exterior air-conditioning and interior heating units.

DURAFORM® LF (Lighting Fixture) Coatings

Duraform LF coatings are specifically formulated for applications that require ultra-high reflectance properties. They are exceptionally clean, sharp-white, cost-effective products that offer excellent formability and stamping characteristics. These coatings can be run at high line speeds and achieve 87+

reflectance at 1-mil coverage, which is ideal for interior lighting fixture applications and ceiling grid systems.

DURAFORM® TR (Transportation) Coatings

Duraform TR polyester-based coil coatings are designed for application over trailers in the transportation market as one-coat systems or painted over a primer layer for extra corrosion performance. Recoating over *Duraform* TR coating enables trailers to highlight company logos and advertising for promotion and added brand awareness.

Touch-Up Coatings

DURANAR® ADS (Air-Dried System) Field-Applied Coatings

As one-component products featuring the same properties for chalk and fade as factory-applied *Duranar* coatings, *Duranar* ADS coating were created expressly for the repair, restoration and/or repainting of metal buildings originally finished with factory-applied *Duranar* coatings.

CORAFLON® ADS (Air-Dried System) Field-Applied Coatings

Coraflon ADS coatings are two-component coatings that must be applied by PPG approved applicators. A breakthrough field-applied coating optimized for restoration of weathered architectural metals, *Coraflon* ADS coatings offer unsurpassed color retention and chalk resistance.

With low volatile organic compound (VOC) content, *Coraflon* ADS coatings meet code requirements for most regions and can be applied on building panels, architectural accents, curtainwalls, roofs, aluminum windows, doors, handrails, stairs and other structurally sound surfaces.

DURACRYL® Acrylic Lacquer Touch-Up Coatings

Duracryl acrylic lacquer touch-up coatings are designed for small repairs to AAMA 2603-type coatings. Available through most aerosol touch-up companies and automotive body shops, this air-dry product is recommended only for repairing small scratches and surface blemishes over factory-applied coatings, and not for major repairs.