

Rapid coatings development and implementation



The Secure Launch Excellence™ process



We protect and beautify the world™

Doing it right. Doing it faster.

In today's global economy, time is money. That's true for every part of your business, whether the goal is to reduce the time it takes to speed your products from one end of the production line to the other, or to get new ones from the drawing board to the showroom more quickly.

At PPG, we understand that same sense of urgency has to apply to your coatings. That's why we've developed the *Secure Launch Excellence* process, a comprehensive, step-by-step system designed to accelerate the development of new coatings colors and formulations, and transition them quickly and seamlessly into your manufacturing processes.



Phase I: Documenting customer requirements

Any traveler knows that to reach a destination faster, you have to plan the route ahead of time. The first phase of the *Secure Launch Excellence* process is dedicated to doing just that.

In Phase I, the primary function is to gather and document information. Through face-to-face meetings with your product designers, manufacturing engineers and other stakeholders, we seek to address every aspect of the prototype coating, from related environmental regulations to finished color, performance and quality expectations.

We also conduct an extensive in-plant audit of your painting and manufacturing processes to gain a thorough understanding of your production line, from equipment conditions and oven cure profiles to process controls for color variation, coating thickness, environmental emissions, defects and other critical benchmarks.

In addition to documenting your coatings requirements, Phase I also helps with your company's internal schedules and planning. Before Phase I is complete, your product launch team will know exactly how the *Secure Launch Excellence* process works, and the specific responsibilities each individual will have in guiding the coatings development process to a successful conclusion.



Phase II: Product development and application validation

In Phase II, the *Secure Launch Excellence* process moves from information gathering to actual product development and testing.

Once an initial color match is generated, PPG uses sophisticated statistical analysis to continually test and refine the prototype coating until it meets the appearance, performance and manufacturing specifications established in Phase I.

For instance, PPG may test a series of resins and pigments in a coating formulation, based on their cost or availability, to assess their compatibility or their impact on color, sprayability or adherence to the sample substrate.

Because this analysis is rigorous and data-driven, it enables PPG to quickly make adjustments to the developmental coating, reducing the time it takes to move from initial formulation to a trial coating that can be tested on an actual production line.

Once the coating sample is approved, preparations are made for Phase III.

How does it work?

The *Secure Launch Excellence* process has been adapted from proven accelerated product launch systems developed by PPG for other customer industries, such as automotive and consumer electronics, and covers the four phases most critical to the rapid development of a successful product or coating.

Working with your staff, the *Secure Launch Excellence* team takes ownership of the coating development process from the very beginning, using thorough documentation and a strictly regimented methodology to formulate a coating that meets your color, manufacturing and environmental requirements.



Phase III: Production trial planning and execution

Is the prototype coating compatible with the sample substrate? Can it be applied with your production line or do adjustments need to be made to the coating or the manufacturing equipment?

PPG works directly with you to answer such questions by planning and executing a production trial to validate the coating in your manufacturing facility.

This phase begins with a planning meeting among your engineering, manufacturing and product development personnel and the *PPG Secure Launch Excellence* team. Together, they define the trial process and establish upper and lower performance limits for variables such as color consistency, film thickness, viscosity and other strictly defined parameters.

The prototype coating is then applied to parts on your production line and data are measured against metrics established in the planning meeting. If the coating fails at any point in this assessment process, the *PPG Secure Launch Excellence* team immediately addresses the issue so they can resume the trial as quickly as possible. If the coating performs as planned, trial reports are circulated to key personnel and the coating is readied for Phase IV.

Phase IV: Product commercialization and production review

The final step is mass production of the coating and full-scale application in your coating operation. As in Phase III, the *PPG Secure Launch Excellence* team works with your personnel to establish measurement parameters, then tracks them throughout the coating process.

Once the new coating is successfully integrated into your manufacturing operation, our team collaborates with yours to implement a process of continuous product improvement that is focused on preventing problems, enhancing coating quality and advancing the reliability and cost-efficiency of your operation.



The benefits of the *Secure Launch Excellence* process

- First-run capability >** We help you minimize the time, waste and cost associated with multiple trials and failures, and by eliminating duplicate steps in the coating development process. Our system helps to ensure that the new coating works on your production line the first time it is sprayed on a part.
- Faster to market >** Our process works. Over the years, and in a variety of industries, it has been refined into a logical, disciplined, highly regimented process that generates production-ready coatings in the shortest time possible. As a result, you get products to market faster and save time and money in the process.
- Global collaboration >** We involve key stakeholders from your company and ours at the earliest stages, assigning specific responsibilities to each person at every stage of the *Secure Launch Excellence* process. There is no guessing. Everyone on your team will know exactly what they need to do and when.

PPG: WE PROTECT AND BEAUTIFY THE WORLD™



A trusted global coatings leader

Operations in 70 countries, with 150+ manufacturing facilities and 70,000+ employees



Renowned color expertise

Trend-setting palettes for home, auto and industry paired with unrivaled color matching



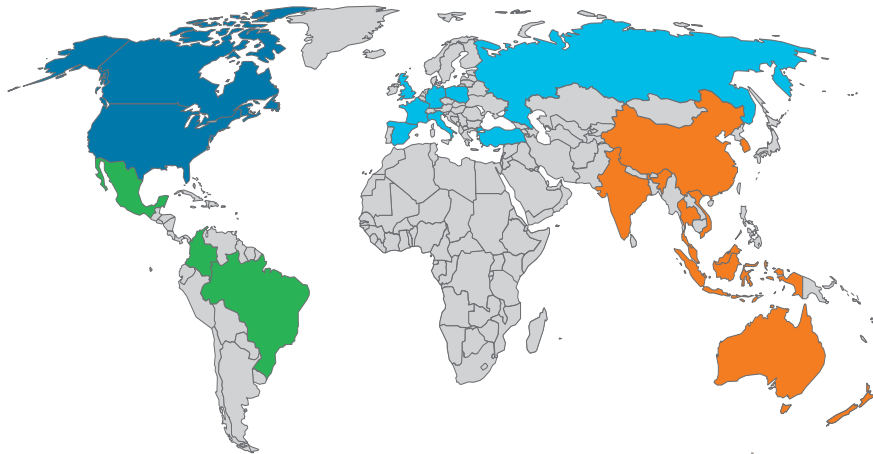
Commitment to sustainability

Over 30% of annual sales from sustainably advantaged products and processes



Dedication to innovation

3,500+ technical employees and \$470+ MM average annual R&D investment



Industrial coatings from PPG

- World-class technical services and training
- Help meeting specific, coatings-related environmental mandates
- Assistance setting up new equipment and identifying areas where your processes may be streamlined
- Troubleshooting production issues
- SECURE LAUNCH EXCELLENCE™ accelerated custom product formulation and color development process

To learn more about PPG coatings, please visit us online at ppgindustrialcoatings.com, or contact one of the international sales offices listed below.

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