



Rational Coating Formulation: Material Science and Practices (CP-6680-V)

A large number of coatings require substantial reformulation. *Rational Coating Formulation* differs from conventional approaches in that it relies upon the established material properties of coating ingredients and assesses the interactions and reactions among ingredients prior to formulation. The approach is similar to material reliability, practiced in aeronautic and electronics industries to develop and produce reliable and high-performing products.

The objective of this highly interactive course is to demonstrate, discuss, compare and contrast the methodologies used in *Rational Formulation* approaches. Intrinsic and extrinsic properties of all raw materials in most common coating technologies will be evaluated and the clear justification of choice of raw materials will be discussed. In addition, the effects of materials' attributes upon coating performance, durability and overall cost of architectural, industrial and automotive coatings will be presented.

WHO SHOULD ATTEND?

This interactive training is highly recommended for coating formulators, chemists, researchers, design and spec engineers, manufacturing personnel, and those who need to learn the latest findings, implement the most efficient formulation methodologies, and produce the highest performing coating products.

WHAT YOU WILL LEARN:

- Become familiar with *Rational Formulation* concepts and approaches.
- Gain in-depth knowledge of the material science of coatings and performance criteria.
- Learn how the reactions and interactions of raw materials affect coating performance.
- How to design an original formula: What, when, how much to use and why?
- Learn how to estimate performance and durability ahead of formulation.

Virtual Course Outline

- Conventional and *Rational Formulation* comparisons.
- How raw material interactions are verified.
- The role of raw material interactions in formulation and coating properties.
- What is solvent and what is diluent? The effect of each on coating properties.
- The role of additives, and their selection in *Rational Formulation*.
- How to avoid additive deactivation and malfunction.
- *Rational Formulation*-based starting point formulation development.
- Performance comparison of the *Rational Formulation* approach to a conventional approach to formulation.

Virtual Course Details

- The virtual course will be presented through live Microsoft Teams sessions. Participants may attend from either home or office, and will require a computer with a microphone and webcam.

- Participants must attend 100% of all sessions to receive an electronic certificate of completion.
- Scheduled course times are Eastern Standard Time (EST).
- Private questions/consulting sessions maybe scheduled by attendees during the designated hours.
- **All training materials (slides) will be available for download.**