



Coatings and Paint Technologies and Trends: Formulation and Application (CP-6620)

OBJECTIVES:

This workshop is designed to provide up-to-date information on raw materials, coating formulation, properties, application and selection of various coating materials. Concepts, ingredients and composition of industrial, automotive, trade sales, marine, and aerospace coatings will also be discussed. Coating types and selection, performance criteria, problem resolution, and opportunities in new coatings and raw materials needs are also included.

WHO SHOULD ATTEND?

This course is specifically designed to provide a thorough understanding and working knowledge of today's coatings and paints to general personnel in the industry. It is highly recommended to personnel at all levels, formulators, marketing, technical sales, paint users, customer support staff, field representatives, manufacturing personnel and all others who need a broad knowledge of this dynamic and complex technology.

WHAT YOU WILL LEARN:

- Coating composition: the basic functions of coating ingredients.
- Raw materials and their properties.
- Types of paints and coatings, and their basic properties.
- Fundamentals of adhesion and corrosion.
- How to select coatings for your application.
- Application and processing methods.
- Unmet raw materials and coating product needs.
- Problem resolution: raw materials, finished paint, and applications troubleshooting.

COURSE OUTLINE:

I. Day One

- A. Overview of the global coatings and paint market
- B. Overview of paint technologies
- C. The basic role of paint ingredients: Resins, solvents, pigments and additives
- D. Fundamentals of polymer (resin) chemistries
- E. Film formation: Drying and curing of paints and coatings, all technologies
- F. Enhancing coating properties through raw materials selection
- G. Properties and formulation using additives and solvents

II. Day Two

- A. Fundamentals of adhesion
- B. Requirements of good surface preparation
- C. Improving adhesion through formulation, application, and process
- D. Fundamentals of Corrosion
- E. Methods of corrosion control by coatings

III. Day Three

- A. Coating types and properties-all technologies: Solvent borne and water-based coatings
- B. Introduction to water-based coatings formulation and selection
- C. Fundamentals of powder and UV cured coatings
- D. Introduction to automotive OEM and aftermarket products
- E. Evaluation and standard test methods
- F. Coping with environmental regulations
- G. Identifying composition and application problems