

Fundamentals of Coatings and Paint Technology

CP-6618

Objectives

The objectives of this course are to discuss the fundamentals of paint composition, application and processing. As such, basic ingredients of industrial, automotive, and trade sales paints, and paint properties will be presented. Paint selection, performance criteria, application methods, defects, problem resolution, and future paint and raw materials needs, will also be discussed.

Who should attend?

This course is specifically designed to provide a through fundamental understanding and working knowledge of today's coatings and paints to general personnel in the industry. It is highly recommended for beginners, 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

- What elements make up a paint
- The basic role of paint ingredients
- Fundamentals of paint adhesion
- Requirements of good surface preparation
- Types of paint/coatings and their basic properties
- How to select performing coatings
- Application and processing methods
- What does market need today (2013)?
- Problem resolution: raw material, finished paint and applications troubleshooting

Course outline:

- Overview of global coatings and paint market
- Overview of paint technologies
- The basic role of paint ingredients: Resins, solvents, pigments and additives
- Drying and curing of paints and coatings, all technologies
- Evaluation and standard test methods
- Coping with environmental regulations
- Fundamentals of adhesion
- Surface preparation
- Corrosion control by coatings
- Color and appearance in coatings
- Coating types and properties-all technologies: Solvent borne, water-based, Powder and UV cure

- Electrocoat, EC/Electrodeposition, ED
- Basic formulation of industrial, architectural and automotive coatings
- Identifying composition and application problems
- Coating defects, prevention methods and troubleshooting
- Why coatings fail and what to do about it?