

# Emulsion Polymerization and Waterborne Coatings CP-6626

## Objectives

This course specifically deals with water-based resin technology, coating formulations and properties. Throughout the course, facts and findings as well as formulation guidelines will be discussed.

## Who should attend?

This course is designed to provide technical information for paint manufacturers, industry suppliers and users of coatings and paint materials at all levels. It is specifically recommended for formulators, raw materials suppliers, paint users, chemists, engineers and quality control personnel.

## What you will learn

- Gain an overall understanding of water-based resin and coating chemistries and formulations.
- Learn advantages and disadvantages of water-based coatings.
- Become familiar with present technology and future trends.
- Receive unbiased technical information on properties of raw materials, resins and coatings.
- Obtain latest technical information and receive formulation guidelines.

## Course outline:

### Waterborne resin chemistry

- Introduction to waterborne coatings
- Waterborne resin types and properties
- Water-reducible and latex resins: acrylic, alkyd, epoxy, polyester, polyurethane and hybrid resins
- Emulsion polymerization technologies
- Film formation and cure of waterborne coatings

### Formulation guidelines

- Additives, pigments and their function
- Adhesion of waterborne coatings
- Corrosion control with waterborne coatings
- Formulating automotive, industrial and maintenance coatings
- Half-day laboratory session: formulation and application

### Formulation, application and evaluation

- Testing and evaluation
- Adhesion promoter and primer technology
- Electro-coat and special-purpose coatings
- Durability and performance of waterborne coatings
- Problem-solving session