ChemQuest POWDER COATING RESEARCH

PC Kitchen™

The Powder Coating Kitchen:

Intro to Powder Coating Formulation

Course Description

The PC Kitchen Intro to Powder Coating Formulation introduces new formulators, chemists, and scientists to the fundamentals of creating a powder coating from the ground up. An introduction to resin chemistry and corresponding crosslinker technology will enable the chemist to understand how to construct a binder to meet the performance specified by the coating end user. A survey of powder coating additives, colorant pigments, and extenders rounds out the basics of formulation technology.

This hands-on course is held in ChemQuest Powder Coating Research's working powder coating laboratory, which includes practical sample making and coating evaluation. This PC Kitchen course is eligible for CEU (continuing education) credits.

Day One

Morning

9:00 Introductions and Course Overview

9:15 Powder Coating Evolution and Nomenclature: How Did We get Here?

9:45 Binder Chemistry: The Heart of a Powder Coating

10:45 Break

11:00 Binder Chemistry - Continued

11:45 Powder Application: A Very Electrifying Experience (Lecture and Hands-On Lab Demo)

12:15 Lunch

Afternoon

1:00 Colorant Pigments: Color My World

1:35 Extender Pigments: Very Filling

2:10 Processing: It May be a Coating, But it's Made Like a Plastic

2:45 Break

3:15 Lab Time: Let's Make a Powder Coating

4:00 Open Discussion

Dinner on your own or with your new friends

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Day Two

Morning

8:30 Additives: The Voodoo of Formulating

9: 30 The Mechanics of Formulating: Creating Products to Satisfy the Most Discerning Customers

10:30 Break

11:00 Test Methods and Analysis: Characterizing Performance of Powder Coatings

11:30 Formulating Assignments: Show Us What You Now Know

12:00 Lunch

Afternoon

1:00 Lab Time: Create Your Own Powder Coating

2:30 Evaluation of Your New Creation: Film Appearance and Mechanical Testing

3:30 Wrap-Up

Recommended Attire

Attendees should wear safety glasses and comfortable shoes/clothes suitable for lab activities such as powder coating lab test panels and evaluating coating properties.

Location and Nearby Hotels

ChemQuest Powder Coating Research
1823 O'Brien Rd.
Columbus, OH 43228

Courtyard by Marriott (1.2 miles) – (614) 771-8999
https://www.marriott.com/en-us/hotels/cmhwt-courtyard-columbus-west-hilliard/overview/

Fairfield Inn (2.3 miles) – (614) 643-4300
https://www.marriott.com/hotels/travel/cmhwe-fairfield-inn-and-suites-columbus-hilliard/

Holiday Inn – (2.1 miles) - (614) 335-1150
https://www.ihg.com/holidayinn/hotels/us/en/columbus/cmhbi/hoteldetail

Hampton Inn – (2.2 miles) - (614) 851-5599
https://www.hilton.com/en/hotels/cmhwehx-hampton-columbus-west/

About Your Instructors

Eric Casebolt | ecasebolt@chemquest.com

An accomplished leader with a proven track record of providing viable and actionable solutions to organizational goals, Eric Casebolt joined ChemQuest in 2023. Eric's career started at Johnson Polymer Inc. and evolved to include numerous roles of increasing responsibility with BASF and Eastman Chemical Co. He has worked to develop and market many resin technologies and formulation additives for use in coatings, packaging, and construction applications.

In his most recent role as strategy manager for Eastman, Eric served as an internal strategy consultant for several of the company's global business units. He earned a bachelor's degree in chemistry from the University of Wisconsin Parkside, a master's degree in chemistry from DePaul University, and an MBA from Wake Forest University.

Nathan Biller | nbiller@chemquest.com

Nathan Biller started his career in the powder coating industry in 2001 with Jamestown Powder Coatings, joining Powder Coating Research Group in 2011 (PCR was acquired by ChemQuest in 2021). He soon emerged as the team's lead formulator, tackling complex formulation challenges in numerous industries, including transportation (outdoor-durable powders), medical instruments (clamping equipment for brain surgery), aerospace (low-temperature-cure powders for composites), injection-molded automotive trim parts (UV curable, highly metallic, and exterior durable), and architectural (hyper-durable powders).

As a member of the CQPCR leadership team, Nathan assists clients in navigating strategic and business challenges. In addition, his technical skills continue to lead to numerous technology development advancements.