

Dry Blending Technology

Powder Mixing Processes and Challenges

DIRECTED BY

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ACCREDITED
COURSE

- Enter b Bulk Powder Properties and Characteristics
- The Blending Process
- Blending Equipment: How to Select the Right Technology
- Challenges in Blending Operation
- Blending Scale-up
- Process Troubleshooting

about the course

Dry blending is a key process in many industries. It is very important to understand the bulk solid properties that are present in an operation and how this affects process effectiveness. A lack of understanding can lead to excessive downtime and unnecessary expense to a company.

Several key areas will be covered including bulk solids properties, mixing technologies, and bulk solids handling. Further, many challenges around mixing products will be addressed such as cohesiveness, blending accuracy, segregation, and particle breakdown.

This 90-minute accredited training will follow a lecture/discussion/video presentation format. Demonstrations of the various types of mixing equipment, cleaning, troubleshooting, and maintenance procedures will be shown.

Experience top-notch training LIVE from an industry expert that goes beyond traditional lectures. You will engage in an interactive and stimulating learning experience that will help you develop the skills you need to excel in your field.

Those attending the LIVE training event must have a webcam on their computer equipped with a microphone and speakers/headset to fully participate

who should attend

This course is intended for professionals in processing industries such as chemical, biotechnology, agricultural, food, pulp, and paper, pharmaceutical, household cleaners, cosmetics, etc.

Attendees who will benefit include:

- Operations professionals from various industries use dry materials in their process and wish to optimize blending times and other important variables.
- Engineering and Science professionals who wish to develop a deeper understanding of the dry blending process to select the best equipment for their operation.
- Quality Control professionals who wish to develop a deeper understanding of the key parameters and control points in the dry blending process.
- R&D Scientists who wish to learn about scale-up techniques

learning objectives

Upon completion of this course, you will be able to:

- State the key bulk solids parameters that are most important in the blending process
- Explain the design and operating variables and their effects on performance in the dry blending process
- Conduct proper equipment selection, optimization, cleaning, and maintenance for an application
- List the parameters that can create challenges in blending
- Conduct process analysis and troubleshooting
- Perform scale-up from the pilot plant to production.

course outline

Review of Learning Objectives

Module 1: Introduction

- Bulk Powder properties
- Which variables are most important in mixing equipment?
- Case Study

Module 2: Blending Equipment

- Ribbon blenders
- “V” blenders
- Cone and auger blender
- Fluidized zone blender
- Which blending technology to use?
- How to scale up from a pilot plant to a production line?
- Case Study

Module 3: Challenges and Troubleshooting Techniques

- Powders cohesiveness
- Segregation
- Overmixing
- Particles integrity
- Case Study

Question and Answer

Assessment Opportunity

course instructor

Herberto Dutra, Mechanical Engineer with 30 years of experience in processing industries with careers at the World's Finest Chocolate, Kraft Foods, Nestle, Bay Valley, and Sensient, including many years of hands-on experience in the design and operations of chocolate production lines. Mr. Dutra's expertise ranges from the design and construction of chocolate plants to day-to-day operation, troubleshooting, and optimization. Academically, Mr. Dutra holds a bachelor's degree in mechanical engineering from UERJ (Rio de Janeiro, Brazil), an MBA from Keller Graduate School, and is currently finishing his master's in mechanical engineering at Purdue University. Through his employers, Mr. Dutra has written and taught several training courses in Chocolate Technology, Spray Drying, Powder Handling, Agglomeration, Liquids Handling, Cooking Processes, Plant Design, Packaging, and many other programs developed for Operations Professionals, Engineering, Scientists, etc.

Accreditations



International Accreditors for Continuing Education and Training (IACET)

Cobblestone has been approved as a CEU Accreditor by IACET and awards CEUs for participation in qualified courses. Cobblestone has demonstrated that it complies with the ANSI/IACET Standards and is authorized to offer IACET CEUs for its programs. CEUs will be awarded for participation in Cobblestone's courses at the rate of .1 CEU per contact hour upon successful completion of the entire course and 70% accuracy in the required Learners' Assessment. A minimum score of 80% is required for all courses within a Cobblestone Certification Program. This course offers a total of 1.5 contact hours or .2 CEUs. For further information, visit www.iacet.org