



## **CerarMix Applicator Specialist 4 Week Training Syllabus**

**Course Mission:** To provide the educational and technical proficiency for successful CerarMix Structural Coatings applications using patented CerarSpray equipment.

### ***Week 1 E-learning:*** - Independent Study

Monday through Wednesday - three two hour sessions over a three day consecutive period.

1. Science of CerarMix / CerarMix Coatings
2. Panelized Building Systems / Transportable Structures
3. Pre-coated Pipe / Composite Products

**Session Online Quiz (6 total)**

**Thursday Online Final Exam Submission by 12:00 pm CST**

***E-Learning Objectives:*** The goal of e-learning instruction is to acquire a basic understanding of CerarMix technologies, the industries ACTS CSI serves, and prepare the trainee for further study and hands-on experiences. The trainee should have gained knowledge in the following:

- Features & benefits of CerarMix technology relating to abrasion, corrosion and fire/heat.
- Understand CerarMix nanotechnology concepts.
- Understand the difference between CerarMix C-1 and AR-1 formulas.

***Week 2 Classroom and Workshop Training:*** Instructor led classes & hands-on group workshops.

- Monday through Saturday 8:30 am - 6:30 pm
- 1 hour for lunch/4 - 15 minute breaks

### **20 Hours - Instructor-led classroom sessions 8:30 - 12:30 pm:**

Introduction to the Global Industrial Coatings Market

- Protective Coatings
- Infrastructure - 40% market consumption
- Chemicals, Oil & Gas - 35% market consumption
- Process Industries - 25% market consumption
- Industrial Coatings Demand
  - Government policies relating to infrastructure investment
  - Global Prices for major commodities
  - Harmonization of global regulatory requirements
  - Service life performance
- Industries Served
- Coatings Efficiency



#### Corrosion Protection

- Causes and mechanisms of corrosion
- Corrosion control methods
- Impacts of corrosion
- CerarMix corrosion prevention technology

#### Abrasion Control

- Causes and mechanisms of abrasion
- Abrasive tools
- Abrasion control methods
- Impacts of abrasion
- CerarMix abrasion prevention technology

#### Fire & Heat Control

- Crucial role in public and commercial safety
- Differences in fire protection
  - flame resistant
  - heat barrier
  - fire suppression
  - fire retardant
  - fire resistant
- CerarMix fire and heat control technology

#### MEKP Safety

##### Substrate Surface Preparation

- Surface inspection importance
- Types of substrates
  - Metal
  - Wood
  - Concrete
  - Plastics
- Surface preparation techniques
  - Water Jet
  - Iron Phosphating
  - Zinc Phosphating
  - Chromating
  - Anodizing
  - Blasting
  - Vibratory Finishing

##### CerarMix Formulations & Applications

##### CerarSpray Operations

- Patented process
- Features & benefits
- CerarSpray components
- Equipment failures
- Equipment refurbishment
- Equipment hazards

##### Equipment Safety



Displacement Pump

Material Pump

Catalyst Pump

CerarMix Formulas

- CerarMix nanotechnology
- Product attributes
- Features & benefits
- Formulas and components
- CerarMix functions
- Additives & catalysts
- Market segments
  - Structures
  - Storm shelters
  - Pipes
  - Composites
  - Coatings
  - Panelized Building System
- Industries served
- Cost factors
- Troubleshooting

Quality Control

- Proper surface preparation
- Applicator qualifications
- Proper formula selection - performance specifications
- Application consistency
- Quality control measures - ratio material, coverage
- Documentation of material usage and surface coverage
- Failure Prevention
- Testing

Troubleshooting - CerarSpray Equipment

**Session Quiz**

**Friday Review and CAS I Exam**

**35 Hours - Interactive workshop 1:30 - 6:30 pm Mon-Fri and 8:30 - 6:30 pm Sat**

1. Safety Protocols
2. Substrate Assessments/Documentation
3. Substrate Surface Preparation
4. Math Calculations & Conversions
5. CerarMix Formula Preparation
6. CerarSpray Equipment Breakdown
7. CerarSpray Application
8. Documentation
9. Quality Control

**Saturday CerarSpray Testing**



***Classroom and Workshop Training Objectives:*** The goal of classroom and workshop training is to transition the trainee from a classroom setting to actual hands-on safety and CerarMix application exercises. Special attention is given to CerarSpray equipment care, maintenance and repair procedures. Trainees will be introduced to equipment replacement parts and kits. Each session prepares trainees for real-world situations and is based on various coating scenarios. Training includes instructional techniques, coaching and evaluation, remedial training and record keeping. Training enables the trainee to pass various required OSHA compliant safety exams and the CerarMix Applicator Specialist (CAS) Level 1 exam, and CerarSpray testing.

- Demonstrate OSHA compliant health and safety procedures.
- Demonstrate CerarSpray safety procedures.
- Complete ACTS CSI "Project Evaluation" form.
- Demonstrate math calculations and conversion techniques to create CerarMix formulas
- Identify CerarSpray equipment parts and kits.
- Verbalize the features & benefits of CerarMix technology relating to abrasion, corrosion and fire/heat.
- Demonstrate CerarMix quality control methods.
- Demonstrate various surface preparation techniques.
- Complete various testing and documentation procedures.
- Demonstrate CerarSpray equipment care, maintenance, repair and breakdown procedures.

***Week 3 & 4 Field Apprenticeship:*** On-the-job paid training completes the 4 week training period.

- Monday through Friday - Time and Location TBD

### ***Field Apprenticeship Objectives***

The goal of Field Apprenticeship is to enable trainees to demonstrate learned skills required to properly apply CerarMix in real life, job-site conditions. The Apprentice will be able to implement proper coating application procedures including identifying specifications used in training, preparing appropriate CerarMix formulas to be used, planning appropriate surface preparation, implementing CerarSpray application techniques, dealing with changing ambient conditions, and quality control measures for CerarMix coatings.

- Complete Project Evaluation form for project
- Complete math calculations and conversion techniques to create CerarMix formula specifications for use on project
- Utilize OSHA compliant health and safety procedures specific to job-site
- Utilize CerarSpray safety procedures
- Implement CerarMix quality control methods specific to project
- Implement project specific surface preparation techniques



### *Field Apprenticeship Objectives (con't)*

- Complete project specific testing
- Complete project specific documentation procedures
- Operate CerarSpray equipment
- Perform equipment care, maintenance, and any repair procedures

### *OSHA Compliant Safety Certification*

During the 4 weeks of training, the trainee will participate in OSHA Health & Safety compliant training in preparation for certification in the following areas:

- Industrial First Aid/CPR
- OSHA Safety Orientation
- OSHA Fall Protection
- Flagging Certification
- OSHA Forklift Operation
- OSHA Scaffolding Safety

### *Advanced Training may be offered in the following areas:*

- Abrasive Blast Cleaning
- Water Jetting
- OSHA Construction Training - 30 Hr
- OSHA Disaster Site Worker 16 Hr
- OSHA Confined Space - 8 Hr

For more information on CerarMix Applicator Specialist Training,  
*please email inquiries to: [info@actscsi.com](mailto:info@actscsi.com)*