INSTRUCTOR'S GUIDE

Teaching materials for this training include the following:

- Instructor preparation tools (in course binder Tab 2)
  - ✓ Overall training objectives
  - ✓ At-A-Glance
  - ✓ Preparing to teach this training
  - ✓ What you need to present this training

- Curriculum (in course binder Tab 2 and on flash drive)
  Includes all teaching notes and background information to teach the course. Pairs with Silica in Construction PowerPoint presentation and Laminated slides

- PowerPoint presentations (on flash drive)
  - ✓ Silica in Construction (110 slides) matches Curriculum
  - ✓ Silica Jeopardy Review Game (42 slides)

- PowerPoint slides reference hardcopy
  - ✓ Silica in Construction handout with space for notes (in course binder Tab 2)
  - ✓ Silica Jeopardy Answer Key and Game Board (back pocket of course binder)

- Videos (on flash drive)
  - ✓ "Silica Exposure" (2 minutes) Worksafe BC
  - ✓ "Silica in Construction—from danger to safety" (8 minutes) SBCTC
  - ✓ "Eliminate the Hazard—McCarthy Drilling Project" (7 minutes) SBCTC

- Audio (on flash drive)
  - ✓ Union Bricklayers testimony regarding health effects caused by exposure to silica dust (3:40 minutes) International Union of Bricklayers and Allied Crafts

- 10 Laminated Slides (front pocket of course binder)
  - ✓ Where is silica found/3 forms of crystalline silica
  - ✓ How to know if material contains silica/List of materials that contain silica
  - ✓ Operations that create silica dust/List of tasks that create dust
  - ✓ Respirable particles/Size matters
  - ✓ Diseases caused by silica/Diseases associated with silica exposure
  - ✓ Assessing risk/Examples of engineering controls—wet methods
  - ✓ Before/After photos—more examples of wet method engineering controls
  - ✓ Examples of LEV methods/Before-After photos—examples of LEV controls
  - ✓ Worker best practices/Housekeeping rule
  - ✓ NIOSH-approved respirators/Medical exam facts

OVERALL TRAINING OBJECTIVES

By the end of this training, participants will be able to:

1. Understand what silica is and where it occurs in building materials.

2. Recognize silica hazards and identify tasks/equipment that create exposure to harmful levels of respirable crystalline silica dust.

3. Describe potential health effects and the signs/symptoms of over-exposure to crystalline silica dust.

4. Identify engineering and work practice controls, and personal protective equipment (PPE) that protect workers from over-exposure to crystalline silica dust.

5. Understand the basic requirements of the new 2016 OSHA Silica Standard for Construction.

6. Use best practices when working with and around crystalline silica.

AT-A-GLANCE

Module	Slide #s	Time	Training Goal
Introduction	1-7	6 min	-Acknowledge source -Introduce topic -Course objectives
1. Introduction to Silica	8-18	15 min	-Explain what silica is -Where it naturally occurs -Identify type that is hazardous -Learn which construction materials contain silica
2. Silica as a Hazard	19-34	20 min	-Learn factors that make silica dangerous -Understand why respirable dust is a hazard -Learn key terms related to PEL
3. Tasks and Tools that Create Silica Dust	35-42	35 min	-Understand which tasks and equipment put workers at risk for silica dust exposure -Link these to construction materials
4. Health Effects of Silica Exposure	43-60	45 min	-Explain how breathing silica dust damages the body -Identify diseases associated with silica dust -Learn signs and symptoms of overexposure
5. Controlling Silica Hazards	61-87	45 min	-Risk factors for silica exposure -Learn control strategies for preventing exposure -Types of PPE used for silica dust -Best practices for working with silica
6. The New OSHA Standard	88-108	30 min	-Learn basic components of new standard for construction -What workers can expect on-the-job as employers comply with the standard

Total time: Approximately 3.25 hours

Preparing to Teach This Training

The curriculum is designed to guide you through the entire training with key talking points, background information, activities, and prompting questions to engage the class. The goal of the training is to educate workers about the risks and hazards involved in working with respirable crystalline silica. It is important that workers know when they are likely to be exposed to the hazard; the serious, permanent harm silica dust can cause to their health; what controls should be implemented to protect them; and best practices for assuring they are working safely.

Specialized technical knowledge is not necessary to teach this course. With proper preparation, foremen, union staff, apprenticeship instructors, and others can present the material. The Train-the-Trainer (TOT) class is designed to prepare participants to teach the curriculum by experiencing the training first-hand as well as receiving supplemental technical information from expert guest speakers and teaching tips and adult learning information.

The course is flexible and can be presented in different ways. Feel free to adapt it to your own situation. The minimum recommended training session is 30 minutes. You can use specific modules that are most relevant to your training needs, or present the entire course in one 3.5 hour class.

Laminated Slides: We have provided 10 laminated double-sided slides that can be useful for presenting training at a job site where it is not feasible to use PowerPoint or video. We selected 20 slides from the course PowerPoint that cover essential information from each training module. Use the curriculum talking points with these slides to present a shorter, basic training or refresher class. They may be also work well in conjunction with a tailgate training or toolbox talk.

PRACTICE! However you decide to present this training, it is always essential to study the curriculum and rehearse your presentation before holding a class. The curriculum provides a level of detail designed to provide the information you need to competently teach the material. Some of this information is intended to enhance the trainer's understanding of the concepts. You may choose to target only key points in your training as outlined at the beginning of each section and as shown on the PowerPoint slides.

If you have any questions or need help using this material, please contact the SBCTC Project Coordinator whose contact information is listed in the front of your binder.

What you need to present this training:

- Flash drive provided at the TOT class—(PowerPoint files)
- Computer and LCD projector for PowerPoint presentation
- Speakers for videos and audio
- Extension cord and power strip
- Course curriculum
- Class sign-in sheet
- Pre/Post tests
- Class evaluation forms
- Copies of handouts
- Flip chart pad and easel or white board
- Multi-colored markers
- Painter's tape for posting flip charts
- (Optional) Samples of natural silica—pieces of quartz, granite, sandstone, sand
- (Optional) Samples of construction materials—brick, block, concrete
- (Optional) Tools of your trade that create silica dust—e.g. drills, saws, grinders, chippers, jackhammers, etc.
- Props to illustrate size of cubic meter and items that weigh a gram
- Samples of NIOSH-approved air-purifying respirators with proper filters for silica dust
- (Optional) Prizes for playing PowerPoint Jeopardy Review Game
- Master question list for Jeopardy Review Game