

Lead Awareness Syllabus

Time: 8 hours

Maximum Class Size: 20

Prerequisites: None

Course Description:

This course is designed to empower the participant with the skills and knowledge to work safely, effectively, and efficiently on a job site. The history of lead and the health hazards of lead are highlighted. The topics covered in this course are as follows: Routes of entry and storage in the body, health effects, lead exposure tests and treatment, compliance methods, medical surveillance and medical removal protection, and required personal protective equipment (PPE).

Goals/Objectives/Student Learning Outcomes:

- Identify the two major chemical forms of lead used as pigments in paint
- Explain three ways lead poisoning can occur in residential housing
- Identify three examples of recreational exposure to lead
- List four occupations that greatly increase lead-exposure
- Identify the melting and boiling points of lead
- Identify the main routes of entry for lead entering the body
- Explain where lead goes and where it is stored once in the body
- List the acute and chronic side effects associated with lead exposure
- List the body systems that can be damaged by lead exposure
- Explain the special hazards that lead poses for children
- List the 2 types of medical tests used for detecting lead exposure
- Explain how chelating agents help rid of the body of lead
- List the action level and permissible exposure limit (PEL) for lead under the Occupational Safety and Health Administration (OSHA) Interim Lead Standard for Construction (29 CFR 1926.62)
- List the three presumed exposure task categories, provide examples for each task, and list the corresponding exposure ranges
- Describe the compliance methods the employer must follow to ensure worker exposures are reduced to or below the PEL
- List three practices that are prohibited by OSHA in a lead-regulated area
- Explain the importance of medical surveillance to a lead-abatement worker
- Explain medical removal protection, and describe how it works
- List and explain at least six limitations of Air Purifying Respirators (APRs)

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- Describe the following three air purifying respirators and list the assigned protection factor (APF) for each:
 - Half-face Air Purifying Respirator
 - Full-face Air Purifying Respirator
 - Full-face Powered Air Purifying Respirator
- List and explain at least six limitations of Air Purifying Respirators (APRs)
- List and explain the three-filter series and three efficiency levels for particulate filters.
- Explain the terms “breakthrough” and “warning properties” and list four steps that should be taken if breakthrough occurs
- Explain the term “assigned protection factor” (APF) and how it relates to a respirator
- Correctly state the APF for each of the three respirators listed above
- Explain the abbreviation MUC and give the MUC when calculated for lead, for each of the respirators listed above
- Explain the difference between an air purifying respirator and an atmosphere supplying respirator
- Explain the difference between continuous flow and pressure-demand regulators
- State the correct APF for a continuous flow Type C airline
- State the correct APF for a positive pressure, pressure-demand airline
- List and explain the nine requirements of a Respiratory Protection Program
- Explain the difference between a qualitative and quantitative fit test and give an example of each

Standards Addressed

OSHA Lead Standard: 29 CFR 1926.62

Classroom Rules and Procedures

- All classes begin at 6:30 am and end at 3:00 pm
- Upon entering classroom, all participants must sign in and be seated by 6:30 am
- Class will consist of a combination of lecture, video, demonstration, coached group exercises, individual exercises and assessment.
- Students are required to report to class ready to work and maintain the provided PPE

Textbooks/Readings/Materials

- LIUNA: *Lead Awareness IG*
- LIUNA: *Lead Abatement Worker PG*
- Lead Awareness Student Handout Packet
- LIUNA: Lead Abatement Worker PowerPoint
- LIUNA: *Lead In Construction Medical Surveillance DVD*

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Tools/Equipment/Other Materials

- Computer
- LCD Projector
- Flipchart/markers
- Whiteboard/expo markers
- Highlighters
- Filtering Face-pieces
- Half-face APRs
- FFAPRs
- PAPRs
- Optional: Air Line (SAR), SAR with escape bottle

Personal Protective Equipment

- 20 pairs of gloves
- 20 pairs of Safety Glasses
- 20 pairs of Ear plugs
- 20 hard hats

Course Requirements

To receive credit for the course, participants must:

- Be present for full eight hours
- Participate in all classroom exercises
- Pass a written exam

Course Policies

- Participants must be on-time and ready to work.
- Participants must return from breaks on-time.
- Participants must participate in each exercise and assignment
- Participants who are on “light duty” are not allowed to take this course due to the physically demanding requirements.

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Assessment and Grading

Participants will be assessed on the following:

- All written exams must be passed with a score of 80% or above.
- All hands-on activities and exercises are graded on performance and participation. They are pass/fail and must be passed with a score of 80% or above.

Safety

Failure to maintain and use PPE may result in dismissal from the course.