

Cal Poly

Code of Safe Practice

ACM Window Glazing Removal

Revised 03/27/2015

These following general rules shall be followed and these precautions shall be taken when employees remove asbestos containing or presumed asbestos containing window glazing compound.

GENERAL INFO:

Cal/OSHA Asbestos Work Class:

Class III

Other Hazards:

If the glazing compound or window frame is painted there may be a lead paint hazard. If painted check for lead or presume paint is lead containing. If a heat gun is used to soften painted glazing then ensure the heat gun temperature does not exceed 1000 degrees F. Use caution when working with glass especially broken glass.

REQUIREMENTS:

Competent Person:

Current Contractor/Supervisor training
Current physical and respirator fit test.

Worker:

Current Contractor/Supervisor. Worker and Competent Person can be the same person. Current physical and respirator fit test.

Area Occupancy:

Unoccupied. The room where the glazing will be removed must be unoccupied. Access to window exterior must be restricted so that no one is within 10 feet of the work area.

Posting:

"Danger Asbestos... Authorized Personnel Only..." sign, CalOSHA Poster, a copy of current Asbestos Registration. Staple or otherwise attach all three required postings in one packet with the "Danger Asbestos... Authorized Personnel Only..." sign on top. A "Danger Asbestos... Authorized Personnel Only" sign must be posted at all entrances to the room where the glazing will be removed and on the "clean" side of the plastic barrier. If working on the exterior of the building then place "Do Not Enter" type barrier tape in a 10' radius around the work area.

Regulated Area:

Required. The room where the window glazing will be removed must be unoccupied. Exterior access must be restricted so that no one is within 10 feet of the work area. Place a plastic drop sheet under the work area and enclose the work using a mini-containment.

Respirator:

HEPA filtered respirator required. Must have current physical and respirator fit test.

Protective Equipment:

No asbestos specific personal protective equipment (other than respirator) required, tyveks coveralls recommended. Any non-asbestos specific protective equipment, such as goggles or safety glasses that would normally be required for the activity to be performed must be used.

Personal Air Monitoring:

Required. See Tim Hastings in Environmental Safety x6-6651 for air monitoring equipment.

Decon Area:

Not Required

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REQUIREMENTS: continued

Supplies:

Water (spray bottle), duct tape, disposable sponge or rags, plastic sheeting (6 mil thick), labeled asbestos disposal bags, a box or other rigid container to hold the contaminated glass fragments.

Equipment:

HEPA Vacuum and any equipment necessary for removal of the window glazing.

Work Practices:

General:

- A. Minimize Dust
- B. Work Wet. No Dry scraping, chiseling, sweeping, or shoveling.
- C. Use HEPA Filtered Vacuum.
- D. Prompt Cleanup of Waste and Disposal in Leak-Tight Containers.
- E. Enclose or Isolate Dust Generating Processes
- F. Prohibited Activities: Eating, drinking, smoking, chewing gum or tobacco, or applying cosmetics.
- G. Prohibited Operations: Use of High Speed Abrasive Disc Saws Without HEPA Exhaust; Use of Compressed Air Without a HEPA Filtered Enclosure; Use of Employee Rotation to Minimize Exposure.

Specific:

1. The competent person must be designated prior to the start of work.
2. If the Competent Person is not the person performing the work then the competent person must inspect the worksite AFTER the engineering controls and critical barriers are in place and BEFORE the asbestos work begins. The competent person is responsible for and must inspect/review the following:
 - A. Set Up of Regulated Area
 - B. Set Up and Removal of Critical Barriers and Engineering Controls
 - C. Work Practices
 - D. Set Up of any Air Monitoring and Associated Record Keeping.
 - E. Inspect the worksite for any other health and safety concerns. For example: Electrical, Confined Space, Slip & Fall.
3. A copy of this Code of Safe practices must be present at the jobsite and be available for review prior to the job start
4. Duct tape a layer of plastic sheeting around the window and completely covering the window on the side opposite where the glazing will be removed. Be sure to attach the plastic in such a way that the window area is sealed and there is enough room to remove the glazing and the glass, if necessary, without moving or damaging the plastic.

NOTE: If the window glazing is to be removed at the Carpenters' Shop or other shop area then cover the work area with plastic sheeting. All other requirements still apply.

6. Build a mini-enclosure on the side of the window where the glazing will be removed.
7. If there are any return air ducts (air blows from the room into the duct) within 6 feet of the work area they must be sealed with plastic sheeting and duct tape.
8. Post all entrances to the room where the window glazing will be replaced with "Danger Asbestos Authorized Personnel Only..." and post the plastic covering the window (see #4) on the side opposite the work area.
9. Place a plastic sheet below the work area and extending at least 4' away from the window and at least 4' beyond each side. When working from inside the room cover any furniture or other objects (which can not be moved) with plastic if they are directly below the window.

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REQUIREMENTS: continued

10. Respirator and air monitor use:
 - A. Put on and start Personal Air Monitor.
 - B. Air monitor pump **MUST** be worn on the your body and the sample cassette must hanging over your shoulder in the “breathing zone”.
 - C. Record start time and flow rate (4 liters/minute is recommended).
 - D. Put on your respirator and do a positive and negative pressure fit check. A fit check is not necessary for a PAPR.
11. Use HEPA local exhaust. Place the hose from the HEPA vacuum adjacent to the removal point to capture any fiber release. Installed windows may require a second person to hold the HEPA vacuum nozzle while the glazing is removed.
12. Wet methods required. Any scraping or chipping must be done wet! The only exception to wet methods is if the glazing compound can be removed by heat-softening and peeling or slicing. If heat-softening and peeling or slicing is used, wet methods are required for any scraping or chipping needed to remove residual glazing. Chipping and scraping must be done in a manner that minimizes the spread of debris and the generation of dust.
NOTE: If the glazing compound is painted be sure to check for lead. If lead is present use a heat gun at less than 1000 degrees F otherwise the lead may be vaporised the paint.
13. Place any contaminated glass fragments in a cardboard box or other rigid container.
14. Place a piece of the window glazing in the 4”x6” plastic bag provided in the air sampling kit. Return sample with air sampling kit to Environmental Safety for analysis.
15. After all the glazing compound and glass has been removed HEPA Vacuum the window frame, the area between the window and the protective plastic sheet, and HEPA Vacuum any visible debris on the protective plastic sheet.
16. HEPA Vacuum any visible debris from the plastic sheeting below the work area.
17. Using a disposable sponge or rags wipe down the window frame and the protective plastic sheeting.
16. Remove the protective plastic sheeting and wipe down the window frame one final time.
18. Dispose of all waste as asbestos contaminated. Place all waste in a doubled asbestos waste bag, this includes the protective plastic, plastic sheeting below the work area, all glazing debris, and boxed contaminated glass fragments. Remove the air from the waste bags using the HEPA Vacuum and seal both bag layers with duct tape. **NOTE:** If the box containing contaminated glass fragments will not fit in an asbestos bag then it must be wrapped in two layers of plastic sheeting and sealed with duct tape.
19. Remove respirator and stop air monitor:
 - A. Remove the respirator, seal the cartridges with duct tape, wipe off the respirator with a cleansing wipe.
 - B. Record the end time for the personal air sample, turn off the pump, put the caps back on the filter cassette.
 - C. Fill out and sign the Personal Air Monitoring Log form
20. Place sealed and labeled asbestos waste in the Campus Asbestos Waste Bin.
21. If there are any asbestos related problems, concerns, or questions before or during the job then the worker/supervisor should contact the shop supervisor or Environmental Safety. **DO NOT proceed if you are unsure about work practices, procedures, regulatory requirements, occupancy, etc. ask questions.**

Exposure Determination: Work performed in accordance with the preceding conditions on indicated materials by persons with the specified training will not approach or exceed the PEL (0.1 f/cc - 8HR TWA) or Excursion Limit (1.0 f/cc for 30 Minutes) for asbestos.