

How to Properly Remove Cement Asbestos Board Siding

IMPORTANT: Read these procedures from start to finish, making sure you thoroughly understand them, before any asbestos abatement is undertaken.

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*Note: Home owner removal procedures apply to an owner-occupied, single-family residence in which the owner of the home lives, both prior to and after renovation activities.

The term does not include rental property, multiple-family units, mixed-use structures that contain a residential unit, and structures involved in commercial/ government-related activities (i.e. commercial development, property management, real-estate transactions, ordered demolition, etc.). For these properties, you must notify DNREC-AQM prior to any renovation project.

This publication is limited to the removal of cement asbestos board siding, one of the three most common asbestos abatement projects attempted by homeowners.

DNREC-AQM has available two other guides in this series, "Spray-on Pop-Corn Ceiling" and "Sheet Vinyl Flooring with Asbestos Backing". For more information contact DNREC-AQM.

Before You Begin

Are you sure that the siding contains asbestos?

Submit a small sample for laboratory analysis. Cost is minimal. Laboratories are listed in the yellow pages under "Environmental Services" and "Laboratories-Testing." To take a sample, wet and break off a small piece of siding (about one square inch) and place it inside a zip lock plastic bag.

If for some reason, you decide not to check your siding for asbestos content, assume it contains asbestos and treat it accordingly.

If your siding contains asbestos, are you sure you really want to remove it?

Remember, asbestos is a problem only if fibers are released to the air. Unless cement asbestos board siding is being disturbed, it will not release asbestos fibers. Hence, the safest, easiest and least expensive option may be to leave it alone.

Sometimes, it is possible to work around asbestos without removing it. However, if asbestos-containing siding must be disturbed as part of a remodeling project, then removal may be your only option.

Words of Caution

You are liable.

Your only legal options in having asbestos removed from your home are to hire a certified asbestos abatement contractor or do the work yourself. The law prohibits you from hiring anyone other than a certified asbestos abatement contractor to perform asbestos removal work. Family members and friends may participate, provided they do so on a voluntary, no-pay basis.

Be advised that the removal procedures described in this publication are intended to help homeowners minimize health risks associated with "do-it-yourself" asbestos removals. However, it should be understood that removing asbestos from your home can be dangerous. Some release of asbestos fibers into the air is unavoidable and there are no known safe levels of asbestos exposure.

Be aware that no set of instructions can address all possible situations and variables that a homeowner may encounter in an asbestos removal project. In this publication, we have tried to address the more common and most important issues involved in removing cement asbestos board siding.

However, common sense dictates that unique and particularly challenging asbestos projects should not be undertaken by the home owner. In such cases, it would be prudent to avoid the possibility of asbestos contamination by abandoning the "do-it-yourself" approach and hiring a certified asbestos abatement contractor.

The work will be difficult.

It is important to note that even under the best of circumstances, homeowner-performed asbestos projects can be physically demanding and potentially dangerous.

- Breathing through a respirator is more difficult than normal breathing and places an additional stress on your heart and lungs.
- Protective clothing can become hot and uncomfortable.
- Work can involve ladders and high spaces.
- Eye protection often results in reduced visibility.
- Caution must be taken with wiring and electrical power because of all the water being used to wet the asbestos.

The Delaware Department of Natural Resources and Environmental Control assumes no liability or responsibility for injuries, illnesses or related health problems arising from you performing an asbestos removal project. You assume all risks involved.

Removal Procedures

Basic Rules

- **Worker protection.** During removal, you will need to protect yourself from breathing or spreading asbestos fibers by wearing an appropriate respirator, disposable coveralls, goggles, disposable gloves, and rubber boots (or shoes that may need to be thrown out after the project).
- **Wetting.** Wetting is critical to asbestos fiber control. Before, during and after removal, asbestos siding should be thoroughly wetted with water in order to keep asbestos fibers out of the air. Once removed, asbestos debris should be kept wet until packaged and sealed for disposal.
- **Containment.** You will need to contain your asbestos debris and minimize the release of asbestos fibers. The ground at the base of walls from which siding is removed must be covered with plastic sheeting to ensure all debris is captured and remains on plastic sheeting pending packaging for disposal.
- **Avoiding breakage.** Minimizing the breakage of asbestos siding during removal and handling will help keep asbestos fibers from being released into the air.

Personnel & Supplies

Workers

Although it is possible for one person to do a siding removal job, the task can be more effectively carried out by two workers. With two workers, one can concentrate on carefully removing pieces of siding while the other keeps materials wet and packages debris as it is generated.

- ▶ **Note:** *It is illegal to hire anyone other than a Delaware Licensed asbestos abatement contractor to perform, or assist in, the removal of asbestos.*

Protective equipment and clothing

Before beginning your project, you'll need to obtain the following items:

- **Respirators.** Half-face dual-cartridge respirators, each equipped with a pair of HEPA filters (color coded purple). Request a fit test from the vendor to ensure a proper fit. Respirators provide little protection if they do not fit properly. One respirator is recommended for each person working with the siding material.
 - ▶ **Note:** *Persons with beards cannot be adequately fitted with this type of respirator, therefore should not partake in asbestos abatement work.*
- **Coveralls.** Several pairs of disposable coveralls with built-in booties should be purchased. Oversized coveralls make it easier for workers to move around. Every time a worker leaves the removal area, coveralls should first be removed and disposed of in properly sealed asbestos disposal bags. A new pair of coveralls should be put on prior to each re-entry.
- **Rubber boots.** These are recommended so that coverall booties do not wear through. Rubber boots can be washed off later.
- **Eye protection.** Each person removing asbestos shingles should wear non-fogging goggles or safety glasses.

- **Durable rubber gloves.** Several pairs of durable, disposable rubber gloves should be purchased—enough to supply a pair to each worker per work shift. Every time a worker leaves the work area during a removal project, these gloves should be disposed of in properly sealed asbestos disposal bags. A new pair of gloves should be donned with each re-entry.

Supplies

- **Garden hose.** A hose, equipped with an automatic shut-off spray nozzle, will be needed to supply water at the entrance to the work area.
- **Water sprayer.** A pint spray bottle or garden pump sprayer will be used to wet asbestos containing materials.
- **Liquid dish washing detergent.** Mix a little with water to produce the best results when wetting asbestos.

Removal tools

- **A pry bar** for lifting nails. A bar equipped with a blade at least two inches wide is best.
- **A nail puller** or nail-head cutter.
- **A knife or scissors** to cut polyethylene sheeting.
- **Six mil polyethylene sheeting** to cover a six-foot strip of ground at the base of walls from which siding is being removed and a transition zone for entering and exiting the work area. Other uses may include wrapping containers of removed siding if pre-marked asbestos waste bags are not used for this purpose.
- **Asbestos waste disposal bags** for bagging the removed siding. You'll need about a dozen bags per 100 square feet of siding removed. If siding is to be wrapped rather than bagged, these disposal bags may be needed only for daily disposal of sheet plastic ground cover, disposable coveralls, gloves, etc.

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Personnel & Supplies continued

Debris containers such as barrels, cardboard boxes, or other sturdy containers will be needed to help keep the sharp edges of siding debris from puncturing plastic bags. Perforated plastic containers will not be accepted by waste disposal sites.

Duct tape. Several rolls should be purchased for sealing plastic around windows, etc., in work area, and for sealing disposal bags or wrapped debris.

▶ **Note:** *Safety equipment and other supplies can be obtained from local safety equipment and industrial supply stores. (See the yellow pages for a complete listing.)*

Prep Work

As you prepare to remove the siding, remember that your safety objectives are to keep asbestos fibers out of the air by minimizing breakage, keeping the siding wet and containing all debris.

1. Post signs warning any "drop-in" friends, family and other visitors of the work taking place.
2. To the extent that landscaping and terrain will allow, lay a sixfoot wide strip of 6 mil sheet plastic along the side of the house where removal is to occur. Try to work in the shade so wetted siding will remain wet.

3. Create an entrance/exit "transition" zone to the work area by laying down an additional six-by-six foot piece of sheet plastic in a convenient location next to the plastic strip along the wall. Keep a plastic disposal bag at this point.

4. Thoroughly hose down about 50 square feet of siding.
5. Mix approximately 1 tsp. of liquid dish-washing detergent with water in the pint spray bottle or about a half cup of detergent in a garden pump sprayer.
6. Removal workers should now put on a pair of disposable coveralls. They should then put on gloves, goggles, boots and respirators equipped with HEPA filters.

Removing the Siding

1. Remove pieces of siding by pulling nails or cutting nail heads so as to minimize breakage. If necessary, carefully lift siding pieces with pry tool to expose nail heads.
2. If siding should begin to crack or crumble, immediately wet the cracked or broken areas with the pint spray bottle or garden pump sprayer.
3. Wet the back side of each piece of siding as it is removed.
4. Carefully lower removed siding to the ground. Do not throw or drop it. Breakage releases asbestos fibers.

5. Keep all debris on the plastic strip at the base of the wall and keep it wet until packaged and sealed.

▶ **Note:** *Once removal work begins, do not leave the plastic/work area without first removing disposable coveralls and other protective equipment at the "transition zone." Each re-entry into the plastic lined work area will require a new pair of coveralls and gloves.*

Cleaning Up

1. Load wetted debris and other contaminated materials into "sturdy containers" like steel drums/ barrels, cardboard boxes or burlap sacks. Line containers with 6 mil polyethylene bags or sheets and leave enough excess plastic to cover the debris and seal with duct tape. Boxes should then be wrapped in one more layer of 6 mil plastic or inserted into a single pre-marked asbestos waste disposal bag.
2. Double bag or double wrap other filled containers in pre-marked 6 mil asbestos waste disposal bags. Twist top of each filled bag, bend twisted part in half, and seal it closed with duct tape.

If containers are to be wrapped rather than bagged, use 6 mil polyethylene plastic and ensure all seams are sealed with duct tape. Affix an asbestos warning label to each sealed package.

3. At the end of each work shift, re-wet any debris on the strip of plastic next to the wall. While standing on plastic in the work area, double bag or wrap all debris as described above. Then wrap or roll up the strip of plastic along the wall, working your way back to the entrance/exit "transition zone" strip of plastic. Step onto the transition zone plastic and double bag or wrap the last of the strip plastic.

Decontamination

1. **Stay on last piece of plastic and spray yourself (or each other)** with water to wet down any asbestos debris/fibers on the outside of your respirator and disposable coveralls.

2. **Remove boots, coveralls, and gloves** by peeling them off and turning them inside out as you remove them. Step off the last plastic sheet.

3. **Take off respirators and remove their filters for disposal.**

4. **Wash off and wipe down the tools, respirators, goggles and boots.** Move each item off the plastic as it is cleaned.

5. **Double bag remaining debris and disposal items** in properly labeled asbestos disposal bags or double wrap them in 6 mil

plastic sheets. **Tightly seal each bag or package** with duct tape. Immediately after sealing, each leak-tight container shall be permanently marked with the following information:

- the date that the material was collected for disposal
- the name of the waste generator
- the address where the waste was generated

6. **Use wet rags for any further clean-up.** Never attempt to vacuum or sweep asbestos debris. This will cause any fibers present to become airborne in your house.

7. **Take a shower.**

Disposal

1. Asbestos debris from an asbestos project may be disposed of only at disposal sites or transfer stations licensed to receive such waste. A list of such sites may be obtained by calling **Delaware Solid Waste Authority at (800) 404-7080**. Call sites for disposal fees.

2. A waste manifest is required for disposal at DSWA facilities. Waste manifest forms are available from DSWA, by calling DSWA at (800) 404-7080, or download them from their website at www.dswa.com.

3. All debris must be sealed in **two layers of 6 mil polyethylene plastic**. Remember, siding pieces have sharp edges that can perforate this plastic material unless the siding is first loaded into sturdy containers. Packaged debris in punctured plastic will not be accepted by waste disposal sites. A common method for packaging siding debris is to place wetted pieces of siding into cardboard boxes lined with 6 mil polyethylene plastic. Leave enough polyethylene to cover the siding in the box.

3. Wrap and seal the debris with plastic and duct tape. Next, insert the boxes into pre-marked asbestos waste disposal bags, twist the tops of the bags closed, bend the twisted parts in half and seal them with duct tape. Double bag other debris and seal as above with duct tape. You must write your last name, address, and date of removal on each container.

4. Debris must be legally disposed of within 45 calendar days of being generated. If you must store the packaged debris prior to disposal, ensure it is stored in a secured area, such as a locked basement or garage.

5. All double bagged or wrapped debris must be hauled to a disposal site or transfer station in a covered vehicle.

After reading this booklet, if you have any hesitations about performing the work yourself, you should reconsider. Specially-trained and certified asbestos abatement contractors are always an option. If you have any questions, please contact the DNREC Air Quality Management (DNREC-AQM).

Illustrations

Prying to expose nail heads



Pulling out nails



Removing siding



Disposal



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