

Best Practices for Lead-Safe Remodeling

It's now the law for professional contractors,
but working lead-safe should be
a priority for everyone

BY JUSTIN FINK



Lead safety has been a hot topic since the Environmental Protection Agency (EPA) issued its new Renovation, Repair, and Painting (RRP) Rule. Professional contractors working on pre-1978 houses are now required by law to take extensive job-site precautions to protect themselves and a house's inhabitants from the potential effects of lead dust.

Homeowners working on their own property are exempt from the new rules, but that isn't an excuse to ignore the health dangers of lead dust. Although children under the age of 6 are most at risk of lead-related developmental and behavioral problems, lead poisoning is a concern for everyone.

While this article is not meant to be a manual for the RRP regulations, the information found here will be no surprise to contractors who have already taken the EPA training for lead testing, site and personal protection, and proper disposal of hazardous waste. However, the tools and general approach to dealing with lead safely are universally applicable.

Justin Fink is a senior editor. Remodeling contractor Bob Hanbury, owner of House of Hanbury Builders Inc. in Newington, Conn., contributed to this article. Photos by Rob Wotzak, except where noted.

TRIPLE-TEST IT

Before going to the trouble of setting up drop cloths and donning full coveralls, verify that lead is present in the work area. Unless you're planning on dealing with lead only on a one-time basis, it makes sense to create a dedicated supply kit. Along with lead-test swabs, you should have wet- and dry-cleaning cloths, disposable gloves and booties, and a respirator. Rather than relying on test results from just one area of the work zone, test in three different spots. On the project featured here, the door casing, window casing, and clapboard siding all were tested.

Go beyond the surface. Lead may be lurking under more recent coats of paint, so use a sharp knife to remove a V-shaped chunk of wood, and then test that freshly cut area. To help keep track of the test locations, use Post-it notes that are labeled to correspond with the individual test swabs.



Not all test kits are created equal. Several lead-testing swab kits are on the market, but LeadCheck is the only one that has met the EPA's stringent qualifications for false positives and false negatives. Although the goal is simply to determine if lead is present, these swabs also indicate, roughly, the concentration level. A swab that barely changes color indicates only a minor amount of lead, whereas bright red—as was found on this project—indicates a high level. A 16-pack of LeadCheck swabs sells for about \$45.



1 Black plastic is the best choice

The first step is to protect the ground beneath the work area. Use 6-mil black plastic because it's durable and because dust and debris show up clearly when it is time to clean up later. Secure the plastic to the house with nails or staples, and then seal it with 2-in.-wide painter's tape.

FOLLOW THE 10-FT./20-FT. GUIDELINE

If the test indicates that lead-based paint is present in the work area or will be disturbed in the process of working, the next step is to create a two-stage containment area. The outer area—a radius of 20 ft. from the work being done—alerts passersby to the presence of lead paint. It also prevents kids, pets, or other tradespeople from entering the work area. The inner area—a radius of 10 ft. from any part of the building where lead will be disturbed—is where the dust, paint chips, and building debris will be collected.

2

Watch out for wind

Even a gentle breeze can cause the plastic ground covering to lift or dust to blow around. Use framing lumber to create a dam, and lay scraps of wood over the plastic to keep it flat. If stronger winds are likely to be an issue, plastic wall barriers are a good idea.

3

Seal any openings

Make sure all windows and doors in and around the work area are sealed so that lead dust doesn't get into the house, and so that no one enters the work area in the middle of the job.



KEEP DUST TO A MINIMUM

The goal is to keep lead under control, so the EPA frowns on a few tools and tasks that generate fumes or large amounts of dust. Avoid devices such as heat guns that operate at greater than 1100°F, or tools that grind, scrape, or sand and are not attached to a HEPA-filtered vacuum system.

Protect yourself from head to toe. Personal safety is obviously a concern, so a respirator and gloves are musts in the inner containment zone. You also have to make sure that lead dust doesn't hitch a ride on your clothes or shoes when you leave, so wear your disposable coveralls and booties.



Mist and score before removal. Before removing any lead-painted materials, mist the surface with water to help keep down the dust (right). Then cut along any joints before removing material (below). This way, the worst you're going to do is fracture the wood, not shatter it and create a lot of dust.



Get the right respirator. Disposable respirators (from \$8 to \$10 each) are acceptable when working around lead, but they must bear the N100 or P100 classification. If you are likely to be working around lead dust for an extended amount of time or on multiple occasions, a reusable respirator like the one shown here may be a better option. Prices start at about \$20.



DON'T CUT CORNERS ON CLEANING

After remodeling work is complete, cleanup begins. Disposal is just as important as the prep work and execution of the remodeling. Every piece of debris removed from the containment area must be bagged or wrapped to ensure that lead dust won't be released during transportation to the landfill. Tools and protective gear that will be reused have to be cleaned thoroughly, too.



1 Bag what you can, and wrap the rest

Any item containing lead dust should be double-bagged while it's still within the defined containment area. If it's too big to fit in a bag, it should be wrapped in plastic and then vacuumed before removal.



INTERIOR WORK IS A BIT DIFFERENT

Most of the testing, prep, work, and clean-up rules that are best practice for exterior work also apply to interior work, but there are a few changes and additional steps.

2

Vac it up, wet it down

With all scraps and tools removed, it's time to deconstruct the work area. First, use a vacuum to collect light debris (flip the vac nozzle on edge, as shown here, so that it won't get hung up by its own suction), then wet down the plastic to keep dust from becoming airborne. A HEPA vacuum filter is a must, but it won't do much good in a bargain-bin vacuum. For the best protection, the filter should be used in a vacuum designed so that all the air drawn into the machine passes through the HEPA filter—with no leakage or "blow-by"—before being expelled. Bosch, Metabo, Fein, and Hilti are among the major tool manufacturers offering these vacs; the prices begin at about \$500.

3

Fold the plastic in on itself

Start folding up the plastic at the edges, working your way toward the center. Then remove your protective gear, and do a quick pass over yourself with the vacuum while standing in the plastic. Discard your coveralls with the plastic.



Shrink the containment zone. The 10-ft. containment zone used outdoors shrinks down to a single zone of only 6 ft. for indoor work. Fitting your tools and waste in this small area can be tough. If you can, find a helper so that you can hand off contained waste.



Clean vertical surfaces, too. Interior walls should be covered in plastic. This way, the surface can be wiped, vacuumed, and thrown out at the cleanup stage, eliminating the chance of lead dust remaining on the wall.



Make a final pass. After vacuuming off your coveralls and disposing of the plastic, do one more pass with the vacuum. Finish up with a wet-cleaning cloth, which should be used to wipe no more than 40 sq. ft. before being replaced with a fresh one.