Working with lead-based paint

Remodeling
Painting
Abatement
About this publication

*Working with lead-based paint* is produced by Oregon OSHA, a division of the Department of Consumer and Business Services, and the Oregon Department of Human Services’ Lead-Based Paint Program.

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Introduction

Lead is toxic and can damage the brain, nervous system, blood cells, kidneys, and reproductive organs. Traditional remodeling and painting practices such as dry scraping and sanding create large amounts of dust — and lead dust is the most common cause of lead poisoning in children. By learning to work properly with lead-based paint, you can protect yourself, others, and the environment.

Contractors and employers who do painting, remodeling, or abatement in Oregon are regulated by the Oregon Department of Human Services (Oregon DHS) Lead-Based Paint Program, the Construction Contractors Board (CCB), the Oregon Department of Environmental Quality (DEQ), and Oregon OSHA.

Oregon DHS and CCB certify, license, and register contractors who work with lead-based paint. Oregon OSHA’s lead standard for the construction industry — 1926.62, Subdivision 3/D — sets the workplace requirements to protect employees. DEQ ensures that paint chips, sludge, and other waste products are disposed of properly.
Cover and contain work areas

Lead dust, chips, and other debris that are not contained in the work area will settle on soil, plants, and furniture. Cleaning or replacing these items can be very expensive. Notify next-door neighbors before you begin work. Give them a chance to close windows, move play equipment, and cover exposed plants.

Painters who remove or stabilize paint on housing or child-care settings built before 1978 must obtain a permit from Oregon DHS. Oregon DHS also requires signs, visible from 30 feet, that warn of possible lead-based paint hazards. The Environmental Protection Agency requires that remodelers distribute a lead-paint hazards pamphlet to clients before beginning work.

For more information call the Oregon DHS LeadLine, toll-free, 800-368-5060.
Interior work

- Work in one area at a time.
- Don’t eat, smoke, drink, or apply cosmetics in work areas.
- Turn off all heating, air conditioning, and ventilation systems. Seal air and heat ducts so lead paint dust will not circulate.
- Remove belongings or wrap them in plastic sheeting — especially rugs and upholstered furniture. Use duct tape to secure the sheeting. Once lead-paint dust gets into carpet or upholstery, it’s almost impossible to get out.
- Cover floors, countertops, and carpet with double layers of heavy-duty plastic sheeting (6 millimeters thick) and tape the sheeting to the skirting boards.
- Seal the area from other rooms with heavy-duty plastic sheeting. Cover and seal windows from the inside to keep lead debris out of window screens. Protect passageways or use plastic runners between work areas and exits.
- Keep others, especially children and women of child-bearing age, out of the area.
- Protect yourself. You may need eye protection, a respirator, and coveralls or disposable work suits. Use rubber or coated gloves if you use liquid paint removers or lead cleansers.
Exterior work

- Keep children, pets, and others away from the area.
- Spread heavy-duty plastic sheeting at least 10 feet from the foundation; cover the ground and vegetation. Cover areas of bare soil where children play.
- Protect yourself. You may need eye protection, a respirator, and coveralls or disposable work suits. Use rubber or coated gloves if you use liquid paint removers or lead cleansers.

Choose an appropriate method to remove lead-based paint

Some methods create toxic fumes or mists and others may spread lead dust. Cleaning up contaminants can be very expensive.

Minimize the amount of lead-based paint you disturb. The following are recommended methods for removing lead-based paint:

Hand scraping and sanding

Work wet. Use a plastic spray bottle, garden sprayer, or backpack sprayer with a fine-spray nozzle to wet surfaces. Use a scraper, wire brush, or sanding sponge to remove paint. Do not dry scrape or sand because this creates and spreads lead dust.

Heat guns

If you use a heat gun, keep the heat below 750 degrees F. Do not use extreme heat or an open-flame torch. Lead-based paint heated above 950 degrees F can generate harmful toxic fumes.
Power sanders, grinders, and saws

Use powered sanding and grinding equipment fitted with a special shroud and a high-efficiency particulate air (HEPA) vacuum exhaust. If shrouded HEPA-vacuum tools are not available, use a complete containment system. Always use a complete containment system with abrasive sandblasting equipment. Note: Tasks that require this equipment are called trigger tasks under Oregon OSHA’s lead standard for the construction industry. See Worker protection, Page 11.

Power washers

*Single-family residences.* Use landscape cloth or heavy plastic sheets to contain splash and paint chips. Place burlap bags filled with bark chips or commercial filtering media over storm drains to minimize contamination from runoff. Inspect the drain when the job is finished and remove remaining paint chips.

*Commercial and multifamily residences.* Contact DEQ to find out if you need a wash-water permit.

Chemical paint strippers

Use chemical paint strippers for small tasks only. Have plenty of fresh air moving through the work area; use non-corrosive, nonvolatile strippers; and wear chemical-resistant gloves. Don’t use products that contain methylene chloride, which can be absorbed through the skin and become a health hazard.
Use a respirator

Lead dust can easily get into your bloodstream through your lungs. Use a NIOSH-certified respirator or dust mask and be sure that it fits properly. Don’t use a paper dust mask unless it is NIOSH-certified. Keep plenty of fresh air moving through the work area if you use a chemical stripper.

Clean as you go

Clean up daily. Use a general household cleaner or a special lead cleaner, available at hardware and building-supply stores. Use two buckets: one for cleaning solution and another for clean water. Use one mop or sponge for cleaning and another for rinsing. Change rinse water often to prevent lead dust from contaminating the cleaning solution or the rinse water.

When cleaning walls, start at the top and work toward the bottom. When cleaning floors, start at the farthest point and work toward an exit. Remember that cleaning and rinsing water may contain lead debris. Never pour the water into gutters, street drains, or on the ground. Filter it through a garter-top filter (usually found where paint is sold). Pour the filtered water in a toilet or utility sink.

If possible, wait 24 hours and clean again to ensure that you clean up lead dust that may have settled overnight.
You can also use a HEPA vacuum to clean up wet debris. A HEPA vacuum is designed to pick up very small particles (about $\frac{1}{500}$ the width of a human hair). Don’t dry sweep or use household or shop vacuums, which will spread dust and debris. Filter waste water and pour it into a toilet or utility sink — not on the ground.

**Dispose of waste properly**

Contaminated paint chips, sludge, and other debris can harm people and the environment if not handled properly. Put lead-based paint debris in heavy-duty plastic bags or containers and secure them; you can dispose of them as household rubbish. Don’t leave them at the work site. For more information about waste disposal, contact DEQ, 800-452-4011.

**Finish up**

Shower and change into clean clothes and shoes before you leave the work area. Put the clothes in a heavy-duty plastic bag and wash them separately from other laundry.

**Consider a clearance test**

Although the finished work may look clean, lead dust may still be on some surfaces. A clearance test ensures that a painting or remodeling contractor has not left behind hazardous lead dust. A clearance test requires a technician to take a sample of the dust and send it to a laboratory for testing. Contact Oregon DHS for a list of certified assessors and inspectors.
Frequently asked questions

Why is lead-based paint dangerous?
The biggest source of lead in the environment is lead paint. Most lead poisoning results from inhaled or ingested lead-paint dust. Nearly half of the childhood lead-poisoning cases in Oregon are associated with remodeling work.

How much lead dust is dangerous?
It doesn’t take much. If the sugar in a one-gram packet of sugar were lead dust, it could contaminate one hundred kitchens, 10 feet by 10 feet. The Centers for Disease Control estimates that a piece of lead as small as a grain of sand is enough to poison a child.

How can I clean rugs, carpets, or upholstery that have been contaminated by lead dust?
You can’t. Porous surfaces such as rugs, carpets, or upholstery are lead-dust traps and can’t be cleaned effectively once they’re contaminated. Always cover and seal them with protective barriers such as plastic, or remove them before starting work.

How do I know if a building has lead-based paint?
Buildings and houses built before 1978 may contain lead paint. However, the only way to know for sure is to have a professional inspect the building. Lead inspectors and risk assessors are trained and use special equipment to test for lead. Oregon DHS and the CCB certify and license these professionals; Oregon DHS can provide a list.
Can I use a lead-test kit to find out if paint has lead in it?

Do-it-yourself lead-test kits can tell you that paint contains lead but not how much lead or its exposure risk. A negative test result doesn’t guarantee the paint is lead free.

Lead inspectors and risk assessors are not allowed to use lead-test kits to determine if paint contains lead.

Where can I get training about working with lead-based paint?

For day-long lead-safe work-practice training, call the Oregon DHS LeadLine, 800-368-5060.
Abatement

What is lead-based paint abatement?
Abatement is the permanent removal or elimination of lead-based paint from surfaces or from soil. “Permanent” means that the treatment must last 20 years. Surface abatement includes encapsulation (applying of a tough coating over the painted surface), containment (placement of a rigid barrier over the painted surface), removing the paint, or replacing the contaminated surface. Contaminated soil can be paved over, removed, or replaced.

Do I need to be certified to do lead-based paint abatement?
Yes, you must be certified by Oregon DHS. You must also be registered and licensed by the CCB.

For information about certification, contact Oregon DHS, Lead Based Paint Program, 971-673-0440.

When are painting and remodeling covered by Oregon DHS and CCB rules?
Oregon DHS and CCB rules apply to contractors, painters, and remodelers who remove or stabilize paint on houses or child-care settings built before 1978; they must obtain a permit from Oregon DHS before they begin work.
Worker protection

Oregon OSHA’s lead standard for the construction industry, 1926.62, Subdivision 3/D, requires employers to protect employees whose work could expose them to lead hazards. Requirements include an initial exposure assessment of the work area and a written compliance program.

Assess worker exposures

Employers must perform an initial exposure assessment to determine if their employees are exposed to lead above the action level (AL). Until they do the assessment, employers must assume that employees who perform certain tasks, called trigger tasks, are exposed above the permissible exposure limit (PEL) and must provide their employees with appropriate respirators. The following table summarizes the tasks and appropriate respirators.
## Trigger tasks and appropriate respirators

<table>
<thead>
<tr>
<th>Task</th>
<th>Exposure</th>
<th>Respirator</th>
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<tbody>
<tr>
<td>Manual scraping, sanding, and demolition tasks; heat-gun work;</td>
<td>Up to 10 times the PEL</td>
<td>* N-, P-, or R-100 filtering facepiece</td>
</tr>
<tr>
<td>power-tool cleaning with a dust collector.</td>
<td></td>
<td>* Half-face respirator with HEPA or N-, P-, or R-100 cartridges</td>
</tr>
<tr>
<td>Power-tool cleaning without a dust collector; lead burning; rivet</td>
<td>10 to 50 times the PEL</td>
<td>* Full-face respirator with HEPA or N-, P-, or R-100 cartridges</td>
</tr>
<tr>
<td>busting; dry expendable abrasive cleanup activities; abrasive-</td>
<td></td>
<td>* Tight-fitting powered air-purifying respirator with HEPA or N-, P-, or R-100 cartridges</td>
</tr>
<tr>
<td>blasting-enclosure movement and removal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Torch burning, abrasive blasting, welding, and cutting</td>
<td>50 to 1,000 times the PEL</td>
<td>* Half-mask supplied-air respirator operated in the pressure-demand or positive-pressure mode.</td>
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</tbody>
</table>

Note: The action level for the airborne concentration of lead is 30 ug/m³ of air calculated as an 8-hour time-weighted average (TWA). The PEL is 50 ug/m³, 8-hour TWA.
Develop a written program

If you have employees whose work could expose them to lead, 1926.62 requires that you develop a written compliance program that will ensure their exposure is at or below the PEL. Elements of the written program:

- A description of each task that could expose an employee to lead.
- A description of what you will do to keep exposure below the PEL.
- The technology you will use to achieve the PEL.
- Air-monitoring data that documents lead sources.
- A schedule for implementing the program.

If your employees need to wear respirators, you must have a written respiratory-protection program that meets the requirements of Oregon OSHA’s respiratory-protection standard, 1910.134, Subdivision 2/I, Respiratory Protection.

Effective employee protection also includes personal protective equipment, hand-washing facilities, training, medical surveillance, and biological monitoring. The information on Pages 14-15 summarizes these and other important requirements of 1926.62.
Key requirements of 1926.62

1926.62(d) Exposure assessment and interim protection

1926.62(h) Housekeeping

1925.62(i)(5) Hand washing facilities

1926.62(l)(1)(i) Hazard communication training (or 1926.21, Safety training)

Include the following requirements if employee exposures equal or exceed the action level for one day:

1926.62(d)(4) Monitoring representative of exposure for each exposed employee

1926.62(j)(1)(i) Initial medical surveillance

1926.62(j)(2)(ii) Follow-up blood sampling

1926.62(k) Temporary removal due to elevated blood lead

1926.62(l)(1)(ii)-(iv) Information and training

When employee exposures equal or exceed the action level for more than 30 days in a 12-month period, include the following:

1926.62(j)(1)(ii) Medical surveillance

1926.62(j)(3) Medical exams and consultation

When employee exposures are greater than the permissible exposure limit, include the following:

1926.62(e) Engineering and work practice controls

1926.62(f) Respiratory protection

1926.62(g) Protective clothing and equipment

1926.62(i) Hygiene facilities and practices

1926.62(m) Signs
When employee exposures are greater than four times the permissible exposure limit, include the following:

1926.62(g)(2) *Clean protective clothing daily*

**Trigger task requirements**

1926.62(f) *Respiratory protection*

1926.62(g) *Protective clothing and equipment*

1926.62(i)(2) *Change areas*

1926.62(i)(5) *Hand washing facilities*

1926.62(j)(1)(i) *Biological monitoring*

1926.62(l)(1)(i) *Hazard communication training*

1926.62(l)(2)(iii) *Respirator training*

1926.21 *Safety training*
Contacts

Oregon Department of Human Services, (Oregon DHS) Lead-Based Paint Program

- Certification for lead-abatement activities, lead risk assessors, and inspectors
- Lead-based paint permit for contractors, painters, and remodelers
- Lead-based paint work that requires certification
- Training in lead-safe work practices
- No-cost consultation on lead-safe work practices
- Information about federally-required pre-renovation notification

Phone: 971-673-0440; toll-free LeadLine: 800-368-5060
Web: www.healthoregon.org/leadpaint

Construction Contractors Board (CCB)

- Registration, certification, and licensing of those who do risk assessments, inspections, and abatement.

Phone: 503-378-4621
Web: www.oregon.gov/CCB

Oregon Department of Environmental Quality (DEQ)

- Information about air pollution, water pollution, and disposing of solid and hazardous waste.

Phone toll-free: 800-452-4011
Web: www.oregon.gov/DEQ
Oregon OSHA

- Technical assistance with Oregon’s occupational-safety-and-health standards
- Workplace-safety-and-health consultations
- Safety and health conferences, seminars, and workshops

Phone: Salem central office, 503-378-3272; toll-free, 800-922-2689
Web: www.orosha.org