

Safety & Health Fact Sheet



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Cal/OSHA Consultation Service
California Department of Industrial Relations
P. O. Box 420603 • San Francisco, CA 94142-0603

Lead in Construction

Special Emphasis Program

Cal/OSHA is conducting a Special Emphasis Program to reduce the hazard from **lead in construction** affecting workers, their families and the public.

Why a Special Emphasis Program now?

Cal/OSHA is particularly concerned about lead in construction because of:

- Recognition of significant risk to children from take-home lead, even at very low levels of exposure.
- A boom in housing and public works renovation and rehabilitation projects that disturb lead paint.
- The need for greater protection for workers, their families and the public through a focused inspection and consultation effort.

What are the goals of this program?

Significantly reduce lead exposures for workers, their families and the public by:

- Increased enforcement and consultation to get the word out to contractors, workers, and owners of buildings and other structures that lead is a significant hazard in the construction business.
- Informing employers of regulations they must follow when lead may be present on a construction job.
- Informing workers of the hazards of lead on the job, and to their families, especially children, from lead carried into vehicles or homes on their bodies, shoes or clothing.

What steps do I take to comply with the Cal/OSHA regulation for lead in construction?

Section 1532.1 in Title 8 of the California Code of Regulations makes construction employers responsible, by law, for basic steps in compliance.

Step 1—Recognize the hazard. Lead can be present in a wide range of materials including paints and other coatings, lead mortars, and base metals to be welded on or treated with abrasive blasting. Look at the age of the building or structure, the presence of coatings and other materials that may contain lead, and information from the property owner.

Send samples of materials to be disturbed to a laboratory for lead analysis. Laboratories accredited by the U.S. Environmental Protection Agency National Lead Laboratory Accreditation Program are listed at www.leadlisting.org. Testing methods for lead must meet requirements of Title 8 Section 1532.1(d)(9).

Step 2—On all construction jobs where lead is present the following is required:

- **Housekeeping.** Lead dust on surfaces, especially in eating areas, must be controlled by HEPA vacuuming, wet clean-up, or other effective methods.
- **Hand and face washing.** Workers must have washing facilities with soap and clean water.
- **Training.** Workers must receive training on lead hazards and how to protect themselves.
- **A written compliance program** to assure control of hazardous lead exposures.
- **Exposure determination.** Employers must assess the amounts of lead breathed by workers. This is usually done by employee breathing-zone air sampling. Air sampling results are used to determine if the protective measures in Step 4 must be taken, as well as the type of respirator that must be worn for protection.

Step 3—For certain highly hazardous tasks, called trigger tasks, special protective measures must be taken—including specified respirators—until the employer determines that worker airborne exposures to lead are below levels specified in Section 1532.1.

■ Level 1 trigger tasks

Any of the following with lead-containing coatings or materials: spray painting, manual demolition, manual scraping or sanding, use of heat gun, power tool cleaning with dust collection system.

Minimum required respirator: half-mask respirator with N-100, R-100 or P-100 filters.

■ Level 2 trigger tasks

Any of the following with lead-containing coatings or materials: using lead-containing mortar, lead burning, rivet busting, power tool cleaning without dust collection system, clean-up activities using dry expendable abrasives, abrasive blasting enclosure movement or removal.

Cal/OSHA Consultation Service Offices

For telephone assistance and to request a no-cost consultation at your workplace:

Fresno 559-454-1295	San Bernardino 909-383-4567
Oakland 510-622-2891	San Diego 619-767-2060
Sacramento 916-263-0704	Santa Fe Springs 562-944-9366
	Van Nuys 818-901-5754

Or toll-free **1-800-963-9424**

Minimum required respirator: air-supplied hood or helmet, or loose fitting hood or helmet powered air-purifying respirator with N-100, R-100 or P-100 filters.

■ **Level 3 trigger tasks**

Abrasive blasting, welding, cutting, or torch burning on structures where lead-containing coatings or materials are present.

Minimum required respirator: half-mask supplied air respirator operated in a positive pressure mode.

Pre-job notification is required for jobs involving all trigger tasks. Written notification must reach the nearest Cal/OSHA district office or be made online at www.dir.ca.gov/dosh/Permits.html at least 24 hours before the job starts. See Section 1532.1(p) for details on required information and types of jobs covered.

Protective measures required for all trigger tasks until worker airborne exposures are shown to be below levels specified in Section 1532.1:

- Respirators, protective equipment and clothing.
- Clothing change areas.
- Initial blood testing for lead and zinc protoporphyrin.
- Basic lead hazard, respirator, and safety training.

Also, Section 1532.1(i)(6) requires regulated areas with warning signs for all trigger tasks.

In addition to the specific trigger tasks, whenever there is reason to believe that any other task may cause a hazardous lead exposure, the above protective measures must be taken until the exposure is shown to be below the airborne Permissible Exposure Limit (PEL).

Questions frequently asked

Q. Before starting work on a job that involves disturbance of paint or other coatings, am I required to have a sample of the paint analyzed for lead content?

A. This is the best way to begin assessing the lead hazard at the jobsite. While not specifically required by the Cal/OSHA regulation, material sampling—combined with knowledge of the tasks being done—is the best indicator of the chance of high airborne lead levels, and can help guide the air sampling and exposure control efforts and the choice of required respirators.

Q. If I'm already doing air monitoring and protecting workers with respirators during tasks with high exposures, why do I also need to do blood lead and ZPP monitoring?

Step 4—Where air sampling shows employee exposures above the PEL from any operation, the following controls are required in addition to those for trigger tasks: respirators appropriate to the levels of exposure measured, clean areas for eating and clothing change, showers, full worker training, and medical monitoring with routine blood testing for lead and zinc protoporphyrin (ZPP).

Certification. On jobs at residential and public access buildings, workers exposed to lead above the PEL—and their supervisors—must receive state-approved training and be certified by the California Dept. of Health Services. **[TIP: Information on lead worker certification—phone 800-597-LEAD—or go to www.childlead.com and click on “Prevention”]**

What's in it for me?

Consider the alternatives to compliance: fines up to \$70,000 per violation, medical removal payments to workers with high blood lead levels, and costly job shutdowns.

Some companies find that following the Cal/OSHA regulation increases their business because clients want jobs that are safe for both workers and the environment.

Where can I get help?

The Cal/OSHA Consultation Service helps employers at no cost. Employers can request an industrial hygienist to come to a construction job site, show how air sampling is done and assist in employee training. The Consultation Service is independent of Cal/OSHA's Enforcement Unit.

A. Blood lead and ZPP monitoring are tools that help assess workers' total exposure to lead—including through ingestion, unmonitored operations, and lead contamination in the vehicle and home. It is the most important benchmark for answering the question: “Am I protecting my workers from the hazards of lead on the job?”

Q. How do I get started with a lead medical monitoring program and where do I find a physician to do this?

A. The Department of Health Services Occupational Lead Poisoning Prevention Program listed below can help you get started with this program.

— More resources —

- At the Cal/OSHA website you can find all Title 8 regulations, including Section 1532.1 for lead in construction: www.dir.ca.gov/dosh
- California Department of Health Services Occupational Lead Poisoning Prevention Program website: www.dhs.ca.gov/ohb/olppp phone: 510-622-4332

- Painting and Decorating Contractors of America website: www.pdca.org • phone: 703-383-0800
- SSPC: Society for Protective Coatings website: www.sspc.org • phone: 412-281-2331
- The National Lead Service Providers' Listing System website: www.leadlisting.org