

California Code of Regulations, Title 8

Search or browse...

- [Cal/OSHA](#)
- [Division of Workers' Compensation](#)
- [Workers' Compensation Appeals Board](#)
- [Division of Labor Standards Enforcement and Industrial Welfare Commission](#)
- [Self Insurance Plans](#)
- [Division of Labor Statistics and Research](#)
- [California Apprenticeship Council](#)
- [Office of the Director](#)

Rulemaking - Proposed Regulations

How can we
help you
today?



This information is provided free of charge by the Department of Industrial Relations from its web site at www.dir.ca.gov. These regulations are for the convenience of the user and no representation or warranty is made that the information is current or accurate. See full disclaimer at https://www.dir.ca.gov/od_pub/disclaimer.html.

Subchapter 7. General Industry Safety Orders
Group 16. Control of Hazardous Substances
Article 109. Hazardous Substances and Processes

[Return to index](#)
[New query](#)

§5194. Hazard Communication

(a) (Reserved)

(b) Scope and Application.

(1) This section requires manufacturers or importers to classify the hazards of chemicals which they produce or import, and all employers to provide information to their employees about the hazardous chemicals to which they may be exposed, by means of a hazard communication program, labels and other forms of warning, safety data sheets, and information and training. In addition, this section requires distributors to transmit the required information to employers.

(2) This section applies to any hazardous chemical which is known to be present in the work place in such a manner that employees may be exposed under normal conditions of use or in a reasonably foreseeable emergency resulting from work place operations.

(3) This section applies to laboratories that primarily provide quality control analyses for manufacturing processes or that produce hazardous chemicals for commercial purposes, and to all other laboratories except those under the direct supervision and regular observation of an individual who has knowledge of the physical hazards, health hazards, and emergency procedures associated with the use of the particular hazardous chemicals involved, and who conveys this knowledge to employees in terms of safe work practices. Such excepted laboratories must also ensure that labels of incoming containers of hazardous chemicals are not removed or defaced pursuant to section 5194(f)(9), and must maintain any safety data sheets that are received with incoming shipments of hazardous chemicals and ensure that they are readily available to laboratory employees pursuant to section 5194(g).

(4) This section does not require labeling of the following chemicals:

(A) Any pesticide as such term is defined in the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.), when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Environmental Protection Agency;

(B) Any food, food additive, color additive, drug, cosmetic, or medical or veterinary device, including materials intended for use as ingredients in such products (e.g., flavors and fragrances), as such terms are defined in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301 et seq.) and regulations issued under

that Act, when they are subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Food and Drug Administration;

(C) Any distilled spirits (beverage alcohols), wine, or malt beverage intended for nonindustrial use, as such terms are defined in the Federal Alcohol Administration Act (27 U.S.C. 201 et seq.) and regulations issued under that Act, when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Bureau of Alcohol, Tobacco, Firearms and Explosives; and;

(D) Any consumer product or hazardous substance as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) respectively, when subject to a consumer product safety standard or labeling requirement of those Acts, or regulations issued under those Acts by the Consumer Product Safety Commission.

(5) This section does not apply to:

(A) Any hazardous waste as such term is defined by the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42U.S.C. 6901 et seq.), when subject to regulations issued under that Act by the Environmental Protection Agency;

(B) Tobacco or tobacco products;

(C) Wood or wood products including lumber which will not be processed, where the manufacturer or importer can establish that the only hazard they pose to employees is the potential for flammability or combustibility (non-excluded hazardous chemicals which are used in conjunction with wood or wood products, or are known to be present as impurities in those materials, and wood which may be subsequently sawed or cut, generating dust, are covered by this section);

(D) Articles (hazardous chemicals used in the manufacture or use of an article are covered by this section unless otherwise excluded);

(E) Foods, drugs, or cosmetics intended for personal consumption by employees while in the workplace;

(F) Retail food sale establishments and all other retail trade establishments, exclusive of processing and repair work areas;

(G) Consumer products packaged for distribution to, and use by, the general public, provided that employee exposure to the product is not significantly greater than the consumer exposure occurring during the principal consumer use of the product;

(H) The use of a chemical in compliance with regulations of the Director of the Department of Pesticide Regulation issued pursuant to section 12981 of the Food and Agricultural Code.

(I) Work operations where employees only handle chemicals in sealed containers which are not opened under normal conditions of use (such as are found in marine cargo handling, warehousing, or transportation); however, this section does apply to these operations as follows:

1. Employers shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced;
2. Employers shall maintain copies of any safety data sheets that are received with incoming shipments of the sealed containers of hazardous chemicals, shall obtain a safety data sheet for sealed containers of hazardous chemicals received without a safety data sheet if an employee requests the safety data sheet, and shall ensure that the safety data sheets are readily accessible during each work shift to employees when they are in their work area(s); and,

3. Employers shall ensure that employees are provided with information and training in accordance with subsection (h) except for the location and availability of the written hazard communication program under subsection (h)(2)(C), to the extent necessary to protect them in the event of a spill or leak of a hazardous chemical from a sealed container.

(6) Proposition 65 Warnings.

(A) Notwithstanding any other provision of law including the preceding subsections, an employer which is a person in the course of doing business within the meaning of Health and Safety Code Section 25249.11(a) and (b), is subject to the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65 or the "Act") (Health and Safety Code § 25249.5 et seq.), and shall comply with the Act in the manner set forth in subsections (B) and (C) below. The following employers are not subject to the Act:

1. an employer employing fewer than ten employees;
2. any city, county, or district or any department or agency thereof or the state or any department or agency thereof or the federal government or any department or agency thereof;
3. any entity in its operation of a public water system as defined in Health and Safety Code Section 4010.1.

(B) Exposures Subject to Proposition 65 and Hazard Communication. Before exposing any employee to any hazardous substance that otherwise falls within the scope of this section and which requires a warning under this Act (see 22 CCR Section 12000, Chemicals Known to the State to Cause Cancer or Reproductive Toxicity) except as provided in subsection (D) below, any employer subject to the Act shall comply with the requirements set forth in subsections (d) through (k). Such compliance shall be deemed compliance with the Act.

(C) Exposures Subject to Proposition 65 Only. Before knowingly and intentionally exposing any employee to any hazardous substance that does not otherwise fall within the scope of the section, but which requires a warning under the Act (see 22 CCR Section 12000, Chemicals Known to the State to Cause Cancer or Reproductive Toxicity) except as provided in subsection (D) below, any employer subject to the Act shall either provide a warning to employees in compliance with California Code of Regulations Title 22 (22 CCR) Section 12601(c) in effect on May 9, 1991 or shall comply with the requirements set forth in subsections (d) through (k).

(D) Exposures Not Subject to Proposition 65. A warning required by subsection (B) and (C) above shall not apply to any of the following:

1. An exposure for which federal law governs warning in a manner that preempts state authority.
2. An exposure that takes place less than twelve months subsequent to the listing of the chemical in 22 CCR Section 12000.
3. An exposure for which the employer responsible can show that the exposure poses no significant risk assuming lifetime exposure at the level in question for the chemicals known to the State to cause cancer, and that the exposure will have no observable effect assuming exposure at one thousand (1,000) times the level in question for chemicals known to the State to cause reproductive toxicity, based on evidence and standards of comparable scientific validity to the evidence and standards which form the scientific basis for the listing of such chemical in 22 CCR Section 12000. In any enforcement action the burden of showing that an exposure meets the criteria of this subsection shall be on the employer.

(E) Additional Enforcement of Proposition 65. In addition to any other applicable enforcement provision, violations or threatened violations of the Act may be enforced in the manner set forth in Health and Safety Code Section 25249.7 for violations and threatened violations of Health and Safety Code Section 25249.6. Compliance with 22 CCR Section 12601(c) in effect on May 9, 1991 shall be deemed a defense to an enforcement action under Health and Safety Code Section 25249.7.

(F) All terms and provisions of subsection (b)(6) shall have the same meaning as the following 22 CCR Sections in effect on May 9, 1991: 12201(a), 12201(b), 12201(c), 12201(d), 12201(f), 12201(k), 12502, 12601, 12701(a), 12701(b), 12701(d), 12703, 12705, 12707, 12709, 12711, 12721, 12801, 12803, 12805, 12821 and 12901. The above listed 22 CCR Sections in effect on May 9, 1991 are printed in Appendix G to this section. Additionally, all terms and provisions of subsection (b)(6) shall have the same meaning as in the Act and in 22 CCR Section 12000.

(c) Definitions.

Article.

A manufactured item: (1) Which is formed to a specific shape or design during manufacture; (2) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (3) which does not release, or otherwise result in exposure to, a hazardous chemical under normal conditions of use or in a reasonably foreseeable emergency resulting from workplace operations.

CAS number.

The unique identification number assigned by the Chemical Abstracts Service to specific chemical substances.

Chemical.

Any substance, or mixture of substances.

Chemical name.

The scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name which will clearly identify the chemical for the purpose of conducting a hazard classification.

Chief.

The Chief of the Division of Occupational Safety and Health, P.O. Box 420603, San Francisco, CA 94142, or designee.

Classification.

Identification of relevant data regarding the hazards of a chemical; review of those data to ascertain the hazards associated with the chemical; and decision regarding whether the chemical will be classified as hazardous according to the definition of hazardous chemical in this section. In addition, classification for health and physical hazards includes the determination of the degree of hazard, where appropriate, by comparing the data with the criteria for health and physical hazards.

Combustible liquid.

Any liquid having a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids).

Common name.

Any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a chemical other than by its chemical name.

Container.

Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, tank truck, or the like that contains a hazardous chemical. For purposes of this section, pipes or piping systems are not considered to be containers.

Department.

The Department of Industrial Relations, P.O. Box 420603, San Francisco, CA 94142, or designee.

Designated representative.

Any individual or organization to whom an employee gives written authorization to exercise such employee's rights under this section. A recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

Director.

The Director of Industrial Relations, P.O. Box 420603, San Francisco, CA 94142, or designee.

Distributor.

A business, other than a manufacturer or importer, which supplies hazardous chemicals to other distributors or to employers.

Division.

The Division of Occupational Safety and Health (Cal/OSHA), California Department of Industrial Relations, or designee.

Emergency.

Any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment, which may or does result in a release of a hazardous chemical into the workplace.

Employee.

Every person who is required or directed by any employer, to engage in any employment, or to go to work or be at any time in any place of employment.

Employer.

Employer means:

- (A) The State and every State agency.
- (B) Each county, city, district, and all public and quasi-public corporations and public agencies therein.
- (C) Every person including any public service corporation, which has any natural person in service.
- (D) The legal representative of any deceased employer.

Exposure or Exposed.

Any situation arising from work operation where an employee may ingest, inhale, absorb through the skin or eyes, or otherwise come into contact with a hazardous chemical.

Hazard category.

The division of criteria within each hazard class, e.g., oral acute toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

Hazard class.

The nature of the physical or health hazards, e.g., flammable solid, carcinogen, oral acute toxicity.

Hazard not otherwise classified (HNOC).

An adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in this section. This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in this section, but the effect either falls below the cut-off value/concentration limit of the hazard class or is under a GHS hazard category that has not been adopted by OSHA (e.g., acute toxicity Category 5).

Hazard statement.

A statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Hazardous chemical.

Any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, a hazard not otherwise classified, or is included in the List of Hazardous Substances prepared by the Director pursuant to Labor Code section 6382.

Health hazard.

A chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in subsection (d) and Appendix A to this section - Health Hazard Criteria.

Immediate use.

The hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Importer.

The first business with employees within the Customs Territory of the United States which receives hazardous chemicals produced in other countries for the purpose of supplying them to distributors or purchasers within the United States.

Label.

An appropriate group of written, printed or graphic information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the immediate container of a hazardous chemical, or to the

outside packaging.

Label elements.

The specified pictogram, hazard statement, signal word and precautionary statement for each hazard class and category.

Manufacturer.

A person who produces, synthesizes, extracts, or otherwise makes a hazardous chemical.

Mixture.

A combination or a solution composed of two or more substances in which they do not react.

NIOSH. The National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services.

Physical hazard.

A chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; combustible liquid; water-reactive; or in contact with water emits flammable gas. See Appendix B to section 5194 - Physical Hazard Criteria.

Pictogram.

A composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under this standard for application to a hazard category.

Precautionary statement.

A phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

Produce.

To manufacture, process, formulate, repack, or relabel.

Product identifier.

The name or number used for a hazardous chemical on a label or in the SDS. It provides a unique means by which the user can identify the chemical. The product identifier used shall permit cross-references to be made among the list of hazardous chemicals required in the written hazard communication program, the label and the SDS.

Pyrophoric gas.

A chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130 degrees F (54.4 degrees C) or below.

Responsible party.

Someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

Safety data sheet (SDS).

Written or printed material concerning a hazardous chemical that is prepared in accordance with section 5194(g).

Signal word.

A word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are “danger” and “warning.” “Danger” is used for the more severe hazards, while “warning” is used for the less severe.

Simple asphyxiant.

A substance or mixture that displaces oxygen in the ambient atmosphere, and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

Specific chemical identity.

The chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

Substance.

Chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Trade secret.

Any confidential formula, pattern, process, device, information, or compilation of information which gives its user an opportunity to obtain a business advantage over competitors who do not know or use it. A trade secret shall not include chemical identity information which is readily discoverable through qualitative analysis. Appendix E to section 5194-Definition of Trade Secret sets out the criteria to be used in evaluating trade secrets.

Use.

To package, handle, react, or transfer.

Work area.

A room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

Workplace.

Any place, and the premises appurtenant thereto, where employment is carried on, except a place the health and safety jurisdiction over which is vested by law in, and actively exercised by, any state or federal agency other than the Division.

(d) Hazard Classification.

(1) Manufacturers and importers shall evaluate chemicals produced in their workplaces or imported by them to determine if they are hazardous and classify the chemicals in accordance with this section. For each chemical, the manufacturer or importer shall determine the hazard classes, and where appropriate, the category of each class that apply to the chemical being classified. Employers are not required to classify

chemicals unless they choose not to rely on the classification performed by the manufacturer or importer for the chemical to satisfy this requirement.

(2) Manufacturers, importers, or employers classifying chemicals shall identify and consider the full range of available scientific literature and other evidence concerning the potential hazards. This section does not require manufacturers, importers, or employers to conduct toxicological testing or epidemiological studies of the chemical(s) to determine how to classify the hazards. Appendix A to section 5194 shall be consulted for classification of health hazards and Appendix B to section 5194 shall be consulted for the classification of physical hazards. In addition, the manufacturer, importer, or employer classifying chemicals shall ensure that the identity and health effect of every chemical that they determine does not meet criteria in Appendix A for classification is noted on the safety data sheet if:

(A) There is statistically significant evidence of a hazardous effect; and,

(B) The evidence is based on at least one positive study conducted in accordance with established scientific principles.

(3) Manufacturers, importers, or employers classifying chemicals shall treat any chemical listed on the following sources as a hazardous chemical and shall be required to classify the listed chemical using the criteria as described in Appendix A.

(A) The list of hazardous substances prepared by the Director pursuant to Labor Code section 6382 and as promulgated in title 8, California Code of Regulations, section 339.

(B) 29 CFR part 1910, subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

(C) Threshold Limit Values for Chemical Substances in the Work Environment, American Conference of Governmental Industrial Hygienists (ACGIH) (latest edition).

(D) Chemicals specifically identified and regulated under Title 8, Article 107, Dusts, Fumes, Mists, Vapors and Gases, and Article 109, Hazardous Substances and Processes.

The manufacturer, importer, or employer is still responsible for classifying and categorizing the hazards associated with the chemicals in these source lists in accordance with the requirements of this standard and its appendices.

EXCEPTION to subsection (d)(3): A manufacturer, importer, or employer classifying the hazards associated with the chemicals listed above who determines, based on thorough review of all available evidence, that the chemical does not meet the criteria in Appendix A for classification, is not required to classify that chemical provided that the classifier does all of the following:

1. Documents the basis for that determination including the studies or evidence relied upon, and maintains and makes that documentation available to employees, employers and the Division upon request, in accordance with this Section and Section 3204.

2. Discloses the identity of the chemical and the listing upon which the chemical appears on the SDS.

(4) Manufacturers, importers, and employers classifying chemicals shall treat any of the following sources as establishing that a chemical listed has met the total weight of evidence criteria as described in Appendix A for classification as a known or presumed human carcinogen, or a suspected human carcinogen for purposes of this section:

(A) National Toxicology Program (NTP), *Annual Report on Carcinogens*, (latest edition).

(B) International Agency for Research on Cancer (IARC) *Monographs* (latest editions) .

(C) Substances subject to regulation under the Occupational Carcinogen Control Act or which are regulated in Title 8, Article 110, Regulated Carcinogens.

(D) Substances that meet the definition of “select carcinogen” in Title 8, Section 5191.

EXCEPTION to subsection (d)(4): A manufacturer, importer, or employer classifying the hazards associated with the chemicals listed above who determines, based on thorough review of all available evidence, that the chemical does not cause cancer, need not classify that chemical as a carcinogen, provided that the classifier does all of the following:

1. Documents the basis for that determination including the studies or evidence relied upon, and maintains and makes that documentation available to employees, employers and the Division upon request, in accordance with this Section and Section 3204.

2. Discloses the identity of the chemical, and the listing upon which the chemical appears on the SDS. In addition, a notation shall appear on the SDS, in accordance with Appendix D, for all substances listed by NTP or IARC as carcinogens.

(5) Mixtures.

(A) Manufacturers, importers, or employers evaluating chemicals shall follow the procedures described in Appendices A and B to section 5194 to classify the hazards of the chemicals, including determinations regarding when mixtures of the classified chemicals are covered by this section.

(B) Manufacturers, importers or employers are also required to list any hazardous chemical on the SDS known to be present in a mixture, where the chemical is:

1. either a. One percent or more of the mixture or product or b. Two percent of the mixture or product if the hazardous chemical exists as an impurity in the mixture; and

2. the concentration of the chemical in the mixture is below the cut-off concentration specified in Appendix A.

(C) When classifying mixtures they produce or import, manufacturers and importers of mixtures may rely on the information provided on the current SDS of the individual ingredients except where the manufacturer or importer knows, or in the exercise of reasonable diligence should know, that the SDS misstates or omits information required by this section.

(D) If the manufacturer, importer, or employer classifying a mixture has evidence to indicate that a component present in the mixture presents a health risk below the cut-off/concentration limits in Appendix A, this information shall be included on the SDS in accordance with Appendix D.

(6) Manufacturers, importers, or employers classifying chemicals shall describe in writing the procedures they use to determine the hazards of the chemicals they evaluate. The written procedures are to be made available, upon request, to employees, their designated representatives, the Director, and NIOSH. The written description may be incorporated into the written hazard communication program required under section 5194(e).

(e) Written Hazard Communication Program.

- (1) Employers shall develop, implement, and maintain at the workplace a written hazard communication program for their employees which at least describes how the criteria specified in sections 5194(f), (g), and

(h) for labels and other forms of warning, safety data sheets, and employee information and training will be met, and which also includes the following:

(A) A list of the hazardous chemicals known to be present using a product identifier that is referenced on the appropriate safety data sheet (the list may be compiled for the workplace as a whole or for individual work areas); and

(B) The methods the employer will use to inform employees of the hazards of non-routine tasks (for example, the cleaning of reactor vessels), and the hazards associated with chemicals contained in unlabeled pipes in their work areas.

(2) In multi-employer workplaces, the written hazard communication program shall include the methods employers will use to inform any employers sharing the same work area of the hazardous chemicals to which their employees may be exposed while performing their work, and any suggestions for appropriate protective measures, including the following:

(A) The methods the employer will use to provide the other employer(s) with access to the safety data sheet, or to make it available at a central location in the workplace, for each hazardous chemical the other employer(s)' employees may be exposed to while working;

(B) The methods the employer will use to inform the other employer(s) of any precautionary measures that need to be taken to protect employees during the workplace's normal operating conditions and in foreseeable emergencies; and,

(C) The methods the employer will use to inform the other employer(s) of the labeling system used in the workplace.

(3) The employer shall make the written hazard communication program available, upon request, to employees, their designated representatives, the Chief, and NIOSH, in accordance with the requirements of section 3204(e).

(f) Labels and Other Forms of Warning.

(1) Labels on shipped containers. The manufacturer, importer, or distributor shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged or marked. Hazards not otherwise classified do not have to be addressed on the container. Where the manufacturer or importer is required to label, tag or mark the following information shall be provided:

(A) Product identifier;

(B) Signal word;

(C) Hazard statement(s);

(D) Pictogram(s);

(E) Precautionary statement(s); and,

(F) Name, address, and telephone number of the manufacturer, importer, or other responsible party.

(2) The manufacturer, importer, or distributor shall ensure that the information provided under section 5194 (f)(1)(A) through (E) is in accordance with Appendix C to section 5194, for each hazard class and associated hazard category for the hazardous chemical, prominently displayed, and in English (other languages may also be included if appropriate).

(3) The manufacturer, importer, or distributor shall ensure that the information provided under section 5194 (f)(1)(B) through (D) is located together on the tag, label or mark.

(4) Solid materials.

(A) For solid metal (such as a steel beam or a metal casting) that is not exempted as an article due to its downstream use, or shipments of whole grain, the required label may be transmitted to the customer at the time of the initial shipment, and need not be included with subsequent shipments to the same employer unless the information on the label changes;

(B) The label may be transmitted with the initial shipment itself, or with the safety data sheet that is to be provided prior to or at the time of the first shipment; and,

(C) This exception to requiring labels on every container of hazardous chemicals is only for the solid material itself, and does not apply to hazardous chemicals used in conjunction with, or known to be present with, the material and to which employees handling the items in transit may be exposed (for example, cutting fluids, pesticides in grains or lubricants).

(5) Manufacturers, importers, or distributors shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged, or marked in accordance with this section in a manner which does not conflict with the requirements of the Hazardous Materials Transportation Act (18 U.S.C. 1801 et seq.) and regulations issued under that Act by the Department of Transportation.

(6) Workplace labeling. Except as provided in sections 5194(f)(7) and (f)(8) the employer shall ensure that each container of hazardous chemicals in the workplace is labeled, tagged, or marked with either:

(A) The information specified under section 5194 (f)(1)(A) through (E) for labels on shipped containers; or,

(B) Product identifier and words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.

(7) The employer may use signs, placards, process sheets, batch tickets, operating procedures, or other such written materials in lieu of affixing labels to individual stationary process containers, as long as the alternative method identifies the containers to which it is applicable and conveys the information required by section 5194(f)(6) to be on a label. The written materials shall be readily accessible to the employees in their work area throughout each work shift. In construction, the employer may use such written materials in lieu of affixing labels to individual containers as long as the alternative method identifies and accompanies the containers to which it is applicable and conveys the information required to be on a label.

(8) The employer is not required to label portable containers into which hazardous chemicals are transferred from labeled containers, and which are intended only for the immediate use of the employee who performs the transfer.

(9) The employer shall not remove or intentionally deface existing labels on incoming containers of hazardous chemicals, unless the container is immediately marked with the required information.

(10) The employer shall ensure that workplace labels or other forms of warning are legible, in English, and prominently displayed on the container, or readily available in the work area throughout each work shift. Employers having employees who speak other languages may add the information in their language to the material presented, as long as the information is presented in English as well.

(11) Manufacturers, importers, distributors, or employers who become newly aware of any significant information regarding the hazards of a chemical shall revise the labels for the chemical within six months of becoming aware of the new information. Labels on containers of hazardous chemicals shipped after that time shall contain the new information. If the chemical is not currently produced or imported, the manufacturer, importer, distributor, or employer shall add the information to the label before the chemical is shipped or introduced into the workplace again.

(g) Safety Data Sheets.

(1) Manufacturers and importers shall obtain or develop a safety data sheet for each hazardous chemical they produce or import. Employers shall have a safety data sheet for each hazardous chemical which they use.

Note to (g)(1): Employers should also refer to section 3204 concerning information to be retained after a particular chemical is no longer in use.

(2) The manufacturer or importer preparing the safety data sheet shall ensure that it is in English (although the employer may maintain copies in other languages as well) and includes at least the following section numbers and headings, and associated information under each heading, in the order listed (See Appendix D to section 5194—Safety Data Sheets, for the specific content of each section of the safety data sheet):

(A) Section 1, Identification;

(B) Section 2, Hazard(s) identification;

(C) Section 3, Composition/information on ingredients;

(D) Section 4, First-aid measures;

(E) Section 5, Fire-fighting measures;

(F) Section 6, Accidental release measures;

(G) Section 7, Handling and storage;

(H) Section 8, Exposure controls/personal protection;

(I) Section 9, Physical and chemical properties;

(J) Section 10, Stability and reactivity;

(K) Section 11, Toxicological information;

(L) Section 12, Ecological information;

(M) Section 13, Disposal considerations;

(N) Section 14, Transport information;

(O) Section 15, Regulatory information; and

(P) Section 16, Other information, including date of preparation or last revision.

(Q) A description in lay terms, if not otherwise provided, on either a separate sheet or with the body of the information specified in this section, of the specific potential health risks posed by the hazardous chemical intended to alert any person reading the information.

NOTE TO SECTION 5194 (g)(2): To be consistent with the GHS, an SDS must also include the headings in section 5194 (g)(2)(L) through (g)(2)(P) in order.

(3) If no relevant information is found for any sub-heading within a section on the safety data sheet, the manufacturer, importer, or employer preparing the safety data sheet shall mark it to indicate that no information was found. If the category is not applicable to the hazardous chemical involved, the space shall be marked to indicate that.

(4) Where complex mixtures have similar hazards and contents (i.e. the chemical ingredients are essentially the same, but the specific composition varies from mixture to mixture), the manufacturer, importer or employer may prepare one safety data sheet to apply to all of these similar mixtures.

(5) The manufacturer, importer or employer preparing the safety data sheet shall ensure that the information provided accurately reflects the scientific evidence used in making the hazard classification. If the manufacturer, importer, or employer become aware of any significant information regarding the hazards of a chemical, or ways to protect against the hazards, this new information shall be added to the safety data sheet within three months. If the chemical is not currently being produced or imported, the manufacturer or importer shall add the information to the safety data sheet before the chemical is introduced into the workplace again.

(6) Manufacturers or importers shall ensure that distributors and purchasers of hazardous chemicals are provided an appropriate safety data sheet with their initial shipment, and with the first shipment after a safety data sheet is updated. The manufacturer or importer shall either provide safety data sheets with the shipped containers or send them to the purchaser prior to or at the time of the shipment. If the safety data sheet is not provided with the shipment, the purchaser shall obtain one from the manufacturer, importer, or distributor as soon as possible. The manufacturer or importer shall also provide distributors or employers with a safety data sheet upon request.

(7) Distributors shall ensure that safety data sheets, and updated information, are provided to other distributors and purchasers of hazardous chemicals.

(8) The employer shall maintain copies of the required safety data sheets for each hazardous chemical in the workplace, and shall ensure that they are readily accessible during each work shift to employees when they are in their work area(s). (Electronic access and other alternatives to maintaining paper copies of the safety data sheets are permitted as long as no barriers to immediate employee access in each workplace are created by such options.)

(9) Where employees must travel between workplaces during a workshift, i.e., their work is carried out at more than one geographical location, the safety data sheets may be kept at a central location at the primary workplace facility. In this situation, the employer shall ensure that employees can immediately obtain the required information in an emergency.

(10) Safety data sheets may be kept in any form, including operating procedures, and may be designed to cover groups of hazardous chemicals in a work area where it may be more appropriate to address the hazards of a process rather than individual hazardous chemicals. However, the employer shall ensure that in all cases the required information is provided for each hazardous chemical and is readily accessible during each work shift to employees when they are in their work area(s).

(11) Safety data sheets shall also be made readily available, upon request, to designated representatives, and to the Chief, in accordance with the requirements of section 3204(e). NIOSH and the employee's physician

shall also be given access to safety data sheets in the same manner.

(12) If the safety data sheet, or any item of information required by section 5194(g)(2), is not provided by the manufacturer or importer, the employer shall:

(A) Within 7 working days of noting this missing information, either from a request or in attempting to comply with section 5194(g)(1), make written inquiry to the manufacturer or importer of a hazardous chemical responsible for the safety data sheet, asking that the complete safety data sheet be sent to the employer. If the employer has made written inquiry in the preceding 12 months as to whether the chemical or product is subject to the requirements of the Act or the employer has made written inquiry within the last 6 months requesting new, revised or later information on the safety data sheet for the hazardous chemical, the employer need not make additional written inquiry.

(B) Notify the requester in writing of the date that the inquiry was made, to whom it was made, and the response, if any, received. Providing the requestor with a copy of the inquiry sent to the manufacturer, producer or seller and a copy of the response will satisfy this requirement.

(C) Notify the requestor of the availability of the safety data sheet within 15 days of the receipt of the safety data sheet from the manufacturer, producer or seller or provide a copy of the safety data sheet to the requestor within 15 days of the receipt of the safety data sheet from the manufacturer, producer or seller.

(D) Send the Director a copy of the written inquiry if a response has not been received within 25 working days.

(13) The preparer of a safety data sheet shall provide the Director with a copy of the safety data sheet. Where a trade secret claim is made, the preparer shall submit the information specified in section 5194(i)(15).

(h) Employee Information and Training.

(1) Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new chemical hazard is introduced into their work area. Information and training may relate to general classes of hazardous chemicals to the extent appropriate and related to reasonably foreseeable exposures of the job. Chemical-specific information must always be available through labels and safety data sheets.

(2) Information and training shall consist of at least the following topics:

(A) Employees shall be informed of the requirements of this section.

(B) Employees shall be informed of any operations in their work area where hazardous chemicals are present.

(C) Employees shall be informed of the location and availability of the written hazard communication program, including the list(s) of hazardous chemicals and safety data sheets required by this section.

(D) Employees shall be trained in the methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.).

(E) Employees shall be trained in the physical, health, simple asphyxiation, combustible dust and pyrophoric gas hazards, as well as hazards not otherwise classified, of the chemicals in the work area, and the measures they can take to protect themselves from these hazards, including specific procedures the

employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.

(F) Employees shall be trained in the details of the hazard communication program developed by the employer, including an explanation of the labels received on shipped containers and the workplace labeling system used by their employer and the safety data sheet, and how employees can obtain and use the appropriate hazard information.

(G) Employers shall inform employees of the right:

1. To personally receive information regarding hazardous chemicals to which they may be exposed, according to the provisions of this section;
2. For their physician or collective bargaining agent to receive information regarding hazardous chemicals to which the employee may be exposed according to provisions of this section;
3. Against discharge or other discrimination due to the employee's exercise of the rights afforded pursuant to the provisions of the Hazardous Substances Information and Training Act.

(3) Whenever the employer receives a new or revised safety data sheet, such information shall be provided to employees on a timely basis not to exceed 30 days after receipt, if the new information indicates significantly increased risks to, or measures necessary to protect, employee health as compared to those stated on a safety data sheet previously provided.

(i) Trade Secrets.

(1) The manufacturer, importer or employer may withhold the specific chemical identity of a hazardous chemical, or the exact percentage (concentration) of the substance in a mixture, from the safety data sheet, provided that:

(A) The claim that the information withheld is a trade secret can be supported;

(B) Information contained in the safety data sheet concerning the properties and effects of the hazardous chemical is disclosed;

(C) The safety data sheet indicates that the specific chemical identity and/or percentage of composition is being withheld as a trade secret; and,

(D) The specific chemical identity and percentage is made available to health or safety professionals, employees, and designated representatives in accordance with the applicable provisions of this subsection.

(2) Where a treating physician or nurse determines that a medical emergency exists and the specific chemical identity and/or specific percentage of composition of a hazardous chemical is necessary for emergency or first-aid treatment, the manufacturer, importer, or employer shall immediately disclose the specific chemical identity or percentage composition of a trade secret chemical to that treating physician or nurse, regardless of the existence of a written statement of need or a confidentiality agreement. The manufacturer, importer, or employer may require a written statement of need and confidentiality agreement, in accordance with the provisions of sections 5194(i)(3) and (4), as soon as circumstances permit.

(3) In non-emergency situations, a manufacturer, importer, or employer shall, upon request, disclose a specific chemical identity or percentage composition, otherwise permitted to be withheld under section 5194(i)(1), to a health or safety professional (i.e., physician, nurse, industrial hygienist, safety professional, toxicologist, or epidemiologist) providing medical or other occupational health services to exposed employee(s), and to employees and designated representatives, if:

(A) The request is in writing;

(B) The request describes with reasonable detail one or more of the following occupational health needs for the information:

1. To assess the hazards of the chemicals to which employees will be exposed;
2. To conduct or assess sampling of the workplace atmosphere to determine employee exposure levels;
3. To conduct pre-assignment or periodic medical surveillance of exposed employees;
4. To provide medical treatment to exposed employees;
5. To select or assess appropriate personal protective equipment for exposed employees;
6. To design or assess engineering controls or other protective measures for exposed employees; and,
7. To conduct studies to determine the health effects of exposure.

(C) The request explains in detail why the disclosure of the specific chemical identity or percentage composition is essential and that, in lieu thereof, the disclosure of the following information would not enable the health or safety professional, employee or designated representative to provide the occupational health services described in section 5194(i)(3)(B):

1. The properties and effects of the chemical;
2. Measures for controlling workers' exposure to the chemical;
3. Methods of monitoring and analyzing worker exposure to the chemical; and,
4. Methods of diagnosing and treating harmful exposures to the chemical;

(D) The request includes a description of the procedures to be used to maintain the confidentiality of the disclosed information; and,

(E) The health or safety professional, employee, or designated representative and the employer or contractor of the health or safety professional's services (i.e., downstream employer, labor organization, or individual employee), agree in a written confidentiality agreement that the health or safety professional, employee, or designated representative will not use the trade secret information for any purpose other than the health need(s) asserted and agree not to release the information under any circumstances other than to the Director, as provided in section 5194(i)(6), except as authorized by the terms of the agreement or by the manufacturer, importer, or employer.

(4) The confidentiality agreement authorized by section 5194(i)(3)(D) shall not include requirements for the posting of a penalty bond.

(5) Nothing in this standard is meant to preclude the parties from pursuing non-contractual remedies to the extent permitted by law.

(6) If the health or safety professional, employee, or designated representative receiving the trade secret information decides that there is a need to disclose it to the Director, then the manufacturer, importer, or

employer who provided the information shall be informed by the health or safety professional, employee, or designated representative prior to, or at the same time as, such disclosure.

(7) If the manufacturer, importer, or employer denies a written request for disclosure of a specific chemical identity or percentage composition, the denial must:

(A) Be provided to the health or safety professional, employee, or designated representative within thirty days of the request;

(B) Be in writing;

(C) Include evidence to support the claim that the specific chemical identity or percent of composition is a trade secret;

(D) State the specific reasons why the request is being denied; and,

(E) Explain in detail how alternative information may satisfy the specific medical or occupational health need without revealing the trade secret.

(8) The health or safety professional, employee, or designated representative whose request for information is denied under section 5194(i)(3) may refer the request and the written denial of the request to the Director for consideration.

(9) When a health or safety professional, employee, or designated representative refers the denial to the Director under section 5194(i)(8), or upon the Director's own initiative when receiving information pursuant to section 5194(g)(13) which is claimed to be a trade secret, the Director shall consider the evidence to determine if:

(A) The manufacturer, importer, or employer has supported the claim that the specific chemical identity or percentage composition is a trade secret;

(B) The health or safety professional, employee, or designated representatives has supported the claim that there is a medical or occupational health need for the information; and,

(C) The health or safety professional, employee, or designated representative has demonstrated adequate means to protect the confidentiality.

(10) If the Director determines that the specific chemical identity or percentage composition requested under section 5194(i)(3) is not a *bona fide* trade secret, or that it is a trade secret but the requesting health or safety professional, employee, or designated representative has a legitimate medical or occupational health need for the information, has executed a written confidentiality agreement, and has shown adequate means to protect the confidentiality of the information, the manufacturer, importer, or employer will be subject to citation by the Director. The Director shall so notify the manufacturer, importer, or employer by certified mail.

(11) The manufacturer, importer, or employer shall have 15 days after receipt of notification under section 5194(i)(10) to provide the Director with a complete justification and statement of the grounds on which the trade secret privilege is claimed. This justification and statement shall be submitted by certified mail.

(12) The Director shall determine whether such information is protected as a trade secret within 15 days after receipt of the justification and statement required by section 5194(i)(11), or if no justification and statement is filed, within 30 days of the original notice, and shall notify the employer or manufacturer and any party who has requested the information pursuant to the California Public Records Act of that determination by certified mail. If the Director determines that the information is not protected as a trade

secret, the final notice shall also specify a date, not sooner than 15 days after the date of mailing of the final notice, when the information shall be available to the public.

(13) Prior to the date specified in the final notice provided pursuant to section 5194(i)(12), a manufacturer, importer, or employer may institute an action in an appropriate superior court for a declaratory judgment as to whether such information is subject to protection from disclosure.

(14) If a manufacturer, importer, or employer demonstrates to the Director that the execution of a confidentiality agreement as provided for by section 5194(i)(10) would not provide sufficient protection against the potential harm from the unauthorized disclosure of a trade secret specific chemical identity, the Director may issue such orders to impose such additional limitations or conditions upon the disclosure of the requested information as may be appropriate to assure that the occupational health services are provided without an undue risk of harm to the manufacturer, importer, or employer.

(15) Notwithstanding the existence of a trade secret claim, a manufacturer, importer, or employer shall disclose to the Director the specific chemical identity or percentage composition of any hazardous chemical in a product for which trade secrecy is claimed. Where there is a trade secret claim, such claim shall be made no later than at the time the information is provided to the Director so that suitable determinations of trade secret status can be made and the necessary protections can be implemented.

(16) Nothing in section 5194(i) shall be construed as requiring the disclosure under any circumstances of process or percentage of mixture information which is a trade secret.

(j) Effective dates.

(1) Employers shall train employees regarding the new label elements and safety data sheets format by December 1, 2013.

(2) Manufacturers, importers, distributors, and employers shall be in compliance with all modified provisions of this section no later than June 1, 2015, except:

(A) After December 1, 2015, the distributor shall not ship containers labeled by the manufacturer or importer unless the label has been modified to comply with section 5194(f)(1).

(B) All employers shall, as necessary, update any alternative workplace labeling used under section 5194 (f)(6), update the hazard communication program required by section 5194(h)(1), and provide any additional employee training in accordance with section 5194(h)(3) for newly identified physical or health hazards no later than June 1, 2016.

(3) Manufacturers, importers, distributors, and employers may comply with either section 5194 revised as of July 6, 2004, or the current version of this standard, or both during the transition period.

(k) Appendices.

(1) Appendices A to E of this section are incorporated as part of this section and the provisions are mandatory.

(2) Appendix F contains information which is not intended to create any additional obligations not otherwise imposed or to detract from any existing obligation.

(3) Appendix G contains the following 22 CCR Sections: 12201(a), 12201(b), 12201(c), 12201(d), 12201(f), 12201(k), 12502, 12601, 12701(a), 12701(b), 12701(d), 12703, 12705, 12707, 12709, 12711, 12721, 12801, 12803, 12805, 12821, and 12901 in effect on May 9, 1991 that are referred to in subsection (b)(6).

Note: Authority cited: Sections 50.7, 142.3 and 6398, Labor Code. Reference: Sections 50.7, 142.3 and 6361-6399.7, Labor Code; Sections 25249.6, 25249.7, 25249.8, 25249.10, 25249.11, 25249.12 and 25249.13, Health and Safety Code; *California Lab. Federation v. Occupational Safety and Health Stds. Bd.* (1990) 221 Cal.App.3d 1547 [271 Cal. Rptr. 310]; and *United Steelworkers of America v. Auchter* (3d Cir. 1985) 763 F.2d 728.

HISTORY

1. New section filed 12-9-81; designated effective 180 days following adoption of a list of hazardous substances pursuant to the Act by the Director, Department of Industrial Relations (Register 81, No. 50).
2. Repealer and new section (including appendices A-C) filed 11-22-85; designated effective 11-25-85 pursuant to Government Code section 11346.2(d) (Register 85, No. 47).
3. Order of Repeal of subsection (a) pursuant to Government Code section 11342(b), amendment, and new appendix D filed 5-26-87; operative 6-25-87 (Register 87, No. 23).
4. Change without regulatory effect removing chapter heading filed 3-6-91; operative 4-4-91 (Register 91, No. 15).
5. Change without regulatory effect repealing Article 110 heading "Special Hazardous Substances and Processes" filed 3-6-91 pursuant to section 100, title 1, California Code of Regulations (Register 91, No. 15).
6. New subsections (b)(6)(A)-(E) and (k)(3) filed 5-31-91 as an emergency; operative 5-31-91 (Register 91, No. 33). A Certificate of Compliance must be transmitted to OAL by 9-30-91 or emergency language will be repealed by operation of law on the following day.
7. Amendment of section filed 9-30-91 as an emergency; operative 9-30-91 (Register 92, No. 2). A Certificate of Compliance must be transmitted to OAL 1-28-92 or emergency language will be repealed by operation of law on the following day.
8. Repealed by operation of Government Code section 11346.1(g) (Register 92, No. 12).
9. New subsections (b)(6)(A)-(F) and (k)(3) refiled 12-17-91; operative 12-17-91. Certificate of Compliance included (Register 92, No. 12).
10. Change without regulatory effect amending definitions of Chief, Department, and Director in subsection (c) filed 3-4-92 pursuant to section 100, title 1, California Code of Regulations (Register 92, No. 19).
11. New subsections (b)(5)(I)-(b)(5)(I)3. and (e)(2)(A)-(C), new subsection (g)(2)(a)3.b. and subsection relettering, new subsection (g)(9) and subsection renumbering, and amendment of subsections (b)(4)(B), (b)(5)(H), (d)(3)(A), (d)(3)(C), (d)(4)-(d)(4)(B), (d)(5)(D), (e)(1), (e)(2), (f), (f)(1), (g)(1), (g)(2)(G), (g)(8), (h)(2)(C), (i)(9), (i)(16) and newly designated subsections (g)(10) and (g)(12)(D) filed 4-26-93; operative 5-26-93 (Register 93, No. 18).
12. Editorial correction of History 9 (Register 94, No. 13).
13. Change without regulatory effect amending subsection (g)(12)(A) filed 12-14-94 pursuant to section 100, title 1, California Code of Regulations (Register 94, No. 50).
14. Repealer of note to subsection (f) filed 9-4-97; operative 10-4-97 (Register 97, No. 36).
15. Change without regulatory effect changing subsection (k) designator to subsection (j) designator filed 3-15-99 pursuant to section 100, title 1, California Code of Regulations (Register 99, No. 12).

16. Amendment of subsections (b)(5)(C), (d)(3)(C) and (d)(4)(A)-(B), new subsection (f)(10) and amendment of subsections (g)(2), (g)(2)(G), (g)(6), (g)(8) and (h)(1) filed 7-6-2004; operative 7-6-2004. Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(3) (Register 2004, No. 28).

17. Amendment filed 5-6-2013; operative 5-6-2013 pursuant to Labor Code section 142.3(a)(4)(C). Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(4) (Register 2013, No. 19).

18. Change without regulatory effect amending subsection (g)(2)(Q) filed 9-17-2013 pursuant to section 100, title 1, California Code of Regulations (Register 2013, No. 38).

19. Amendment refiled 11-6-2013; operative 11-6-2013 pursuant to Labor Code section 142.3(a)(4)(C). Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(4) (Register 2013, No. 45).

20. Repealer of 11-6-2013 order by operation of law 5-6-2014 pursuant to Labor Code 142.3 (Register 2014, No. 19).

21. Amendment of definition of “Combustible Liquid,” and repealer of definitions of “Flammable” and “Flashpoint” within subsection (c) filed 5-5-2014; operative 5-6-2014 pursuant to Government Code section 11343.4(b)(3) (Register 2014, No. 19).

22. Amendment filed 5-5-2014; operative 5-6-2014 pursuant to Government Code section 11343.4(b)(3) (Register 2014, No. 19).

23. Editorial correction of subsection (g)(2)(Q) - Note (Register 2015, No. 37).

24. Change without regulatory effect amending definition of “Safety Data Sheet (SDS)” within subsection (c) filed 1-6-2016 pursuant to section 100, title 1, California Code of Regulations (Register 2016, No. 2).

This database is current through 9/28/18 Register 2018, No. 39

 [Go Back to Article 109 Table of Contents](#)

This information is provided free of charge by the Department of Industrial Relations from its web site at www.dir.ca.gov. These regulations are for the convenience of the user and no representation or warranty is made that the information is current or accurate. See full disclaimer at https://www.dir.ca.gov/od_pub/disclaimer.html.

Subchapter 7. General Industry Safety Orders
Group 20. Flammable Liquids, Gases and Vapors
Article 141. Container and Portable Tank Storage

[Return to index](#)
[New query](#)

§5531. Scope.

This article shall apply only to the storage of flammable or combustible liquids in drums or other containers (including flammable aerosols) not exceeding 60 gallons individual capacity and those portable tanks not exceeding 660 gallons individual capacity.

EXCEPTIONS: This article shall not apply to the following:

- (1) Storage of containers in bulk plants, service stations, refineries, chemical plants, wineries and distilleries.
- (2) Category 1, 2, or 3 flammable liquids in the fuel tanks of a motor vehicle, aircraft, boat or portable or stationary engine.
- (3) Flammable or combustible paints, oils, varnishes and similar mixtures used for painting or maintenance when not kept for a period in excess of 30 days.
- (4) Beverages when packaged in individual containers not exceeding one gallon in size.
- (5) Medicines, foodstuffs, cosmetics and other consumer items containing not more than 50 percent by volume of water miscible flammable liquids and with the remainder of the solution not being flammable when packaged in individual containers not exceeding one gallon in size.

Note: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

HISTORY

1. Amendment filed 7-16-76; effective thirtieth day thereafter (Register 76, No. 29).
2. Amendment of Exception 2 and new Note filed 5-5-2014; operative 5-6-2014 pursuant to Government Code section 11343.4(b)(3) (Register 2014, No. 19).

 [Go Back to Article 141 Table of Contents](#)

This information is provided free of charge by the Department of Industrial Relations from its web site at www.dir.ca.gov. These regulations are for the convenience of the user and no representation or warranty is made that the information is current or accurate. See full disclaimer at https://www.dir.ca.gov/od_pub/disclaimer.html.

Subchapter 7. General Industry Safety Orders
Group 20. Flammable Liquids, Gases and Vapors
Article 146. Piping, Valves and Fittings

[Return to index](#)
[New query](#)

§5608. Pipe Joints.

(a) Joints shall be made liquid-tight. Welded or screwed joints or approved connectors shall be used. Threaded joints and connections shall be made up tight with a suitable lubricant or piping compound. Joints and piping systems handling Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100° F (37.8° C) where located in concealed spaces within buildings or structures shall be welded.

(b) Pipe joints dependent upon the friction characteristics of combustible materials for mechanical continuity of piping shall not be used inside buildings. They may be used outside of buildings above or below ground. If used aboveground, the piping shall either be secured to prevent disengagement at the fitting or the piping system shall be so designed that any spill resulting from such disengagement could not unduly expose persons, important buildings or structures, and could be readily controlled by remote valves.

Note: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

HISTORY

1. Amendment of subsection (a) and new Note filed 5-5-2014; operative 5-6-2014 pursuant to Government Code section 11343.4(b)(3) (Register 2014, No. 19).

 [Go Back to Article 146 Table of Contents](#)

This information is provided free of charge by the Department of Industrial Relations from its web site at www.dir.ca.gov. These regulations are for the convenience of the user and no representation or warranty is made that the information is current or accurate. See full disclaimer at https://www.dir.ca.gov/od_pub/disclaimer.html.

Title 8. Industrial Relations

Division 1. Department of Industrial Relations
Chapter 4. Division of Industrial Safety
Subchapter 7. General Industry Safety Orders
Group 16. Control of Hazardous Substances
Article 109. Hazardous Substances and Processes

[Return to index](#)
[New query](#)

§5198. Lead.

(a) Scope and Application.

- (1) This section applies to all occupational exposure to lead, except as provided in subsection (a)(2).
- (2) This section does not apply to the construction industry or to agricultural operations.

(b) Definitions.

For purposes of this section, the definitions in section 5161 do not apply to the terms used throughout this section.

Action level. Employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 2 micrograms per cubic meter of air ($2 \mu\text{g}/\text{m}^3$), calculated as an 8-hour time-weighted average (TWA).

Altering or disturbing. Subjecting to a process that may result in the release of lead dust, lead mist, lead fume, or other lead particles. Such processes include, but are not limited to, welding, torch cutting, brazing, torch soldering, melting, pouring, spraying, cutting, shredding, crushing, baling, grinding, polishing, machining, drilling, scraping, sanding, abrading, sweeping, raking and shoveling.

Blood lead level. The concentration of lead measured in whole blood, expressed as micrograms per deciliter ($\mu\text{g}/\text{dl}$) of whole blood.

Chief. The Chief of the Division of Occupational Safety and Health (Cal/OSHA), or designee.

Director. The Director, National Institute for Occupational Safety and Health (NIOSH), U. S. Department of Health and Human Services, or designee.

High-efficiency particulate air (HEPA) filter. A filter that is at least 99.97 percent efficient in removing particles 0.3 micrometers in diameter.

Lead. Metallic lead, all inorganic lead compounds, and organic lead soaps. Excluded from this definition are all other organic lead compounds.

Physician or other licensed health care professional (PLHCP). An individual whose legally permitted scope of practice (i.e., license, registration or certification) allows the individual to independently provide or be delegated the responsibility to provide some or all of the health care services required by this section.

Presumed significant lead work (PSLW).

(1) Altering or disturbing material that is:

(A) known to contain lead at a concentration equal to or greater than 0.5% by weight, as a result of material testing or as content listed in a safety data sheet or similar specification sheet; or

(B) reasonably anticipated to contain lead at a concentration equal to or greater than 0.5% by weight. Such materials include, but are not limited to, scrap lead, lead solder, lead bullet fragments and dust, lead sheeting, lead cable housing, and lead billets.

(2) Torch cutting any scrap metal.

Exception: Altering or disturbing material, as specified in this subsection, or torch cutting any scrap metal, does not constitute PSLW when the total combined duration of lead exposure resulting from altering, disturbing, and torch cutting is less than 8 hours during any 30-day period.

Separate Engineering Control Air Limit (SECAL). An airborne concentration of lead calculated as an 8-hour TWA, without regard to respirator use. SECALs for selected processes are included in subsection (e)(1)(C).

(c) Permissible Exposure Limit (PEL).

(1) The employer shall ensure that no employee is exposed to an airborne concentration of lead greater than 10 micrograms per cubic meter of air ($10 \mu\text{g}/\text{m}^3$), calculated as an 8-hour time-weighted average (TWA). The 8-hour TWA shall be calculated in accordance with the appendix to section 5155.

(2) When respirators are used to supplement engineering and work practice controls to comply with the PEL, and all the requirements of subsections (e)(1) and (f) have been met, employee exposure, for the purpose of determining whether the employer has complied with the PEL, may be considered to be at the level provided by the protection factor of the respirator for those periods the respirator is worn. Those periods may be averaged with exposure levels during periods when respirators are not worn to determine the employee's daily TWA exposure.

(d) Exposure Monitoring.

(1) General.

(A) For the purposes of subsection (d), employee exposure is that exposure which would occur if the employee were not using a respirator.

(B) With the exception of monitoring under subsection (d)(4), the employer shall collect full shift personal samples including at least one sample for each shift for each job classification in each work area.

(C) Full shift personal samples shall be representative of the monitored employee's regular, daily exposure to lead.

(2) Protection of Employees Prior to Assessment of Exposure.

Until the employer performs an employee exposure assessment as required under subsection (d) and determines actual employee exposure, the employer shall provide employees performing PSLW with interim protection as follows:

(A) Appropriate respiratory protection consisting of, at a minimum, a half-mask respirator with N100, R100, or P100 filters, in accordance with subsection (f).

Note: A respirator that provides greater protection, such as a full-face respirator, may be appropriate when employees perform tasks such as welding, grinding, torch burning, torch cutting, and cleaning or emptying bullet traps.

(B) Appropriate protective work clothing and equipment, in a clean and dry condition at least weekly, in accordance with subsection (g).

(C) Medical surveillance in accordance with subsection (j).

(D) Training in accordance with subsection (l).

(E) Posted signs in accordance with subsection (m)(2).

(3) Initial Determination. Each employer who has a workplace or work operation covered by this standard shall determine if any employee may be exposed to lead at or above the action level.

(4) Basis of Initial Determination.

(A) The employer shall monitor employee exposures and shall base initial determinations on the employee exposure monitoring results and any of the following, relevant considerations:

1. Any information, observations, or calculations which would indicate employee exposure to lead;
2. Any previous measurements of airborne lead; and
3. Any employee complaints of symptoms which may be attributable to exposure to lead.

(B) Monitoring for the initial determination may be limited to a representative sample of the exposed employees who the employer reasonably believes are exposed to the greatest concentrations of airborne lead in the workplace.

(C) Measurements of airborne lead made in the preceding 12 months may be used to satisfy the requirement to monitor under subsection (d)(4)(A) if sampling and analytical methods used meet the accuracy and confidence levels of subsection (d)(10).

(5) Positive Initial Determination and Initial Monitoring.

(A) Where a determination conducted under subsections (d)(3) and (d)(4) shows the possibility of any employee exposure at or above the action level, the employer shall conduct monitoring which is representative of the exposure for each employee in the workplace who is exposed to lead.

(B) Measurements of airborne lead made in the preceding 12 months may be used to satisfy this requirement if the sampling and analytical methods used meet the accuracy and confidence levels of subsection (d)(10).

(6) Negative Initial Determination. Where a determination conducted under subsections (d)(3) and (d)(4) is made that no employee is exposed to concentrations of airborne lead at or above the action level, the employer shall make a written record of such determination. The record shall include at least the information specified

in subsection (d)(4) and shall also include the date of determination, location within the worksite, and the name and another unique employee identifier (such as date of birth or employee identification number) of each employee monitored.

(7) Frequency.

(A) If monitoring reveals employee exposure to be above $50 \mu\text{g}/\text{m}^3$ as an 8-hour TWA, the employer shall repeat monitoring quarterly until at least two consecutive measurements, taken at least 7 days apart, are at or below $50 \mu\text{g}/\text{m}^3$ as an 8-hour TWA. Subsequent monitoring shall conform with the applicable provisions of subsections (d)(7)(B) or (C), as appropriate, based on the monitoring results.

(B) If monitoring reveals employee exposure to be at or above $30 \mu\text{g}/\text{m}^3$ as an 8-hour TWA but no greater than $50 \mu\text{g}/\text{m}^3$ as an 8-hour TWA, the employer shall repeat monitoring at least every 6 months. The employer shall continue monitoring at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are below $30 \mu\text{g}/\text{m}^3$ as an 8-hour TWA. Subsequent monitoring shall conform with the applicable provisions of subsection (d)(7)(C).

(C) If monitoring reveals employee exposure to be at or above the action level but below $30 \mu\text{g}/\text{m}^3$ as an 8-hour TWA, the employer shall repeat monitoring at least every 12 months. The employer shall continue monitoring at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are below the action level, at which time the employer may discontinue monitoring except as otherwise provided by subsection (d)(8).

(D) Whenever initial monitoring reveals employee exposure to be below the action level, further measurements are not required except as otherwise provided by subsection (d)(8).

(8) Additional Monitoring. Whenever there has been a production, process, control, or personnel change which may result in new or additional exposure to lead, or whenever the employer has any other reason to suspect a change which may result in new or additional exposures to lead, additional monitoring in accordance with this subsection shall be conducted.

(9) Employee Notification.

(A) Within 5 working days after the receipt of monitoring results, the employer shall notify each employee in writing of the results which represent that employee's exposure.

(B) Whenever the results indicate that the representative employee exposure, without regard to respirators, exceeds the permissible exposure limit, the employer shall include in the written notice a statement that the permissible exposure limit was exceeded and a description of the corrective action taken or to be taken to reduce exposure to or below the permissible exposure limit.

(10) Accuracy of Measurement. The employer shall use a method of monitoring and analysis which has an accuracy (to a confidence level of 95%) within plus or minus 20 percent at concentrations of airborne lead equal to or greater than $2 \mu\text{g}/\text{m}^3$.

(e) Compliance.

(1) Methods.

(A) Where any employee is exposed to lead above the permissible exposure limit (PEL), the employer shall implement engineering and work practice controls, including administrative controls, to reduce and maintain employee exposure to lead at or below the PEL, except to the extent that the employer can demonstrate that such controls are not feasible.

(B) Where engineering and work practice controls are not sufficient to reduce and maintain employee exposure to lead at or below the PEL, the employer shall implement such controls to reduce exposure to the lowest level feasible. The employer shall supplement these controls with respiratory protection, in accordance with subsection (f), to control employee exposure to or below the PEL.

(C) Where a SECAL has been specified for particular processes (see Table 1), the employer shall implement engineering and work practice controls to reduce and maintain employee exposure at or below the SECAL, except to the extent that the employer can demonstrate that such controls are not feasible. The employer shall supplement these controls with respiratory protection, in accordance with subsection (f), to control employee exposure to lead at or below the PEL.

Table 1 -- Separate Engineering Control Airborne Limits (SECALs) for Selected Processes; Implementation Schedule

<i>Industry</i>	<i>Process</i>	<i>SECAL and Implementation Dates</i>
Lead acid battery manufacturing	Oxide production; paste mixing; grid pasting and parting; and battery assembly.	50 $\mu\text{g}/\text{m}^3$ on January 1, 2025, then 40 $\mu\text{g}/\text{m}^3$ on January 1, 2030.
	Grid production and small parts casting; and plate formation.	50 $\mu\text{g}/\text{m}^3$ on January 1, 2025, then 30 $\mu\text{g}/\text{m}^3$ on January 1, 2030.
Lead acid battery recycling	Laboratory processes.	50 $\mu\text{g}/\text{m}^3$ on January 1, 2025, then 30 $\mu\text{g}/\text{m}^3$ on January 1, 2030.
	Movement of lead ingots and blocks into storage areas.	
	Movement of lead ingots and blocks for shipping.	
	Maintenance processes.	

(2) Compliance Program.

(A) Each employer shall establish and implement a written compliance program to reduce exposures to or below the PEL or, where applicable, the SECAL, solely by means of engineering and work practice controls in accordance with subsections (e)(1)(B) and (e)(1)(C).

(B) Written plans for these compliance programs shall include at least the following:

1. A description of each operation in which lead is emitted; e.g. machinery used, material processed, controls in place, crew size, employee job responsibilities, operating procedures and maintenance practices;
2. A description of the specific means that will be employed to achieve compliance, including engineering plans and studies used to determine methods selected for controlling exposure to lead;
3. A report of any engineering and work practice controls considered in meeting the PEL but not implemented due to infeasibility, that includes an explanation of how each was determined to be infeasible;
4. Air monitoring data which documents the source of lead emissions;

5. A detailed schedule for implementation of the program, including documentation such as copies of purchase orders for equipment, construction contracts, etc.;
6. A work practice program which includes items required under subsections (g), (h), and (i);
7. An administrative control schedule required by subsection (e)(4), if applicable; and
8. Other relevant information.

(C) Written programs shall be submitted upon request to the Chief and the Director, and shall be available at the worksite for examination and copying by the Chief, the Director, and any affected employee or authorized employee representatives.

(D) Written programs shall be revised and updated at least every 6 months to reflect the current status of the program. The revisions and updates shall be documented in writing, in accordance with subsection (n)(2).

(3) Mechanical Ventilation.

(A) When ventilation is used to control exposure, measurements which demonstrate the effectiveness of the system in controlling exposure, such as capture velocity, duct velocity, or static pressure shall be made at least every 3 months. Measurements of the system's effectiveness in controlling exposure shall be made within 5 days of any change in production, process, or control which might result in a change in employee exposure to lead.

(B) Recirculation of Air. If air from exhaust ventilation is recirculated into the workplace, the employer shall ensure that:

1. The exhaust has a high efficiency filter with a reliable back-up filter; and
2. Controls are installed, operating, and maintained which monitor the concentration of lead in the return air and which, in case of failure, automatically prevent the recirculation of exhaust air.

(4) Administrative Controls. If administrative controls are used as a means of reducing employees' TWA exposure to lead, the employer shall establish and implement a written job rotation schedule that includes:

- (A) The name and another unique identifier (such as date of birth or employee identification number) of each affected employee;
- (B) Duration and exposure levels at each job or work station where such affected employee is located; and
- (C) Any other information which may be useful in assessing the reliability of administrative controls to reduce exposure to lead.

(f) Respiratory Protection.

(1) General. For employees who are required to use respirators by this section, the employer must provide respirators that comply with the requirements of this subsection. Respirators must be used during:

- (A) Work operations for which engineering and work practice controls are not sufficient to reduce exposures to or below the PEL;
- (B) Periods necessary to implement engineering or work practice controls;
- (C) Periods when an employee requests a respirator; and

(D) Periods when an employee performs PSLW, as interim protection in accordance with subsection (d)(2).

(2) Respirator program.

(A) The employer must implement a respiratory protection program in accordance with section 5144(b) through (m) (except subsection (d)(1)(C)).

(B) If an employee exhibits breathing difficulty during fit testing or respirator use, the employer must provide the employee with a medical examination in accordance with subsection (j)(3)(A)3. to determine whether or not the employee can use a respirator while performing the required duty.

(3) Respirator Selection.

(A) The employer shall select, and provide to employees, the appropriate respirators specified in section 5144(d)(3)(A)1. If the employer selects filtering facepiece respirators for protection against lead, they shall be N100, R100, or P100.

(B) The employer shall provide a powered air-purifying respirator in lieu of the respirator specified in subsection (f)(3)(A) whenever:

1. An employee chooses to use this type of respirator, and
2. This respirator will provide adequate protection to the employee.

(C) The employer shall provide employees with full facepiece respirators instead of half mask respirators for protection against lead aerosols that cause eye or skin irritation at the use concentrations.

(D) The employer shall provide HEPA filters for powered air-purifying respirators and N100, R100, or P100 filters for non-powered air-purifying respirators.

(g) Protective Work Clothing and Equipment.

(1) Provision and Use.

(A) The employer shall provide at no cost to the employee and ensure that the employee uses appropriate protective work clothing and equipment:

1. To employees exposed to lead above the PEL without regard to the use of respirators;
2. As interim protection, in accordance with subsection (d)(2), to employees who perform PSLW; and
3. To employees for whom the possibility exists of skin or eye irritation from exposure to lead (e.g. lead arsenate, lead azide).

(B) Appropriate protective work clothing and equipment includes, but is not limited to:

1. Coveralls or similar full-body work clothing;
2. Hats or other head coverings, and shoes or disposable shoe coverlets; and
3. Where needed, gloves, face shields, vented goggles, or other protective equipment, in accordance with General Industry Safety Orders (GISO) Article 10, Personal Safety Devices and Safeguards.

(2) Cleaning and Replacement.

(A) The employer shall provide the protective clothing required in subsection (g)(1), in a clean and dry condition at least weekly, and daily to employees whose exposure levels without regard to respirator use are over $30 \mu\text{g}/\text{m}^3$ of lead as an 8-hour TWA.

(B) The employer shall provide for the cleaning, laundering, or disposal of protective clothing and equipment required by subsection (g)(1).

(C) The employer shall repair or replace required protective clothing and equipment as needed to maintain their effectiveness.

(D) The employer shall ensure that all protective clothing is removed at the completion of a work shift and only in change rooms provided for that purpose as prescribed in subsection (i)(2).

(E) The employer shall ensure that contaminated protective clothing which is to be cleaned, laundered, or disposed of, is placed in a closed container in the change room which prevents dispersion of lead outside the container.

(F) The employer shall inform in writing any person who cleans or launders protective clothing or equipment of the potentially harmful effects of exposure to lead.

(G) Labeling of Contaminated Protective Clothing and Equipment.

The employer shall ensure that labels of bags or containers of contaminated protective clothing and equipment include the following information:

DANGER: CLOTHING AND EQUIPMENT CONTAMINATED WITH LEAD. MAY DAMAGE FERTILITY OR THE UNBORN CHILD. CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM. DO NOT EAT, DRINK OR SMOKE WHEN HANDLING. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.

(H) The employer shall prohibit the removal of lead from protective clothing or equipment by blowing, shaking, or any other means which disperses lead into the air.

Note: A downdraft booth, "air shower," or other appropriate means for the removal of lead dust may be used provided employee exposure to airborne lead dust is prevented during such use.

(h) Housekeeping.

(1) Surfaces. All surfaces shall be maintained as free as practicable of accumulations of lead.

(2) Cleaning Methods.

(A) Floors and other surfaces where lead accumulates shall not be cleaned by the use of compressed air.

(B) Floors and other surfaces where lead accumulates shall be cleaned, wherever possible, by vacuuming or by other methods that minimize the likelihood of lead becoming airborne.

(C) Shoveling, dry or wet sweeping, and brushing shall not be used unless the employer can demonstrate that vacuuming or other equally effective methods have been tried and found not to be effective.

(3) Vacuuming. Where vacuuming methods are selected, the vacuums shall be used and emptied in a manner which minimizes the re-entry of lead into the workplace. Those vacuum systems which exhaust air into the workplace shall be equipped with air filters at least as effective as HEPA filters.

(i) Hygiene Facilities and Practices.

(1) General Hygiene.

(A) The employer shall ensure that in areas where employees are exposed to lead, food or beverage is not present or consumed, tobacco products are not present or used, and cosmetics are not applied.

Exception: In areas where employees are exposed to lead at or below $50 \mu\text{g}/\text{m}^3$ without regard to the use of respirators, the employer may provide employees with access to potable drinking water. The employer must implement, provide training on and ensure compliance with written safe hydration procedures. The employer must be able to demonstrate that employees following these procedures are not exposed to lead above the PEL in accordance with subsection (c)(2), and that water is consumed in a manner that prevents the ingestion of lead.

(B) The employer shall provide an adequate number of washing facilities, or lavatories, in compliance with the provisions of section 3366.

(C) Where necessary to effect lead removal, the employer shall make available special cleansing compounds designed specifically for the removal of lead from skin surfaces.

(D) The employer shall ensure that employees exposed to lead wash their hands, exposed arms, and face prior to entering eating areas, eating, drinking, smoking or applying cosmetics, and at the end of their shift.

(2) Change Rooms.

(A) The employer shall provide clean change rooms for employees who work in areas where their airborne exposure to lead is above the PEL, without regard to the use of respirators. Where employee exposures are above the PEL, but not above $50 \mu\text{g}/\text{m}^3$ without regard to the use of respirators, this requirement shall become effective January 1, 2026.

(B) The employer shall ensure that change rooms are equipped with separate storage facilities for protective work clothing and equipment and for street clothes which prevent cross contamination.

Exception: Separate storage facilities are not required where clean protective clothing and equipment are provided on a daily basis.

(C) The employer shall ensure that employees do not enter personal vehicles or leave the workplace with any protective clothing or equipment that is required to be worn during the work shift.

(3) Showers.

(A) The employer shall ensure that employees who work in areas where their exposure to airborne lead is above the PEL, without regard to the use of respirators, shower at the end of the work shift. Where employee exposures are above the PEL, but not above $50 \mu\text{g}/\text{m}^3$ without regard to the use of respirators, this requirement shall become effective January 1, 2026.

(B) The employer shall ensure that required shower facilities comply with section 3366(f).

(4) Lunchrooms.

(A) The employer shall provide readily accessible lunchroom facilities, in accordance with section 3368, for employees who work in areas where their exposure to airborne lead is above the PEL, without regard to the use of respirators. Where employee exposures are above the PEL, but not above $50 \mu\text{g}/\text{m}^3$ without regard to the use of respirators, this requirement shall become effective January 1, 2026.

(B) Lunchroom facilities shall have a temperature controlled, positive pressure, filtered air supply except that such facilities need not be under positive pressure if workplace operations produce no contamination by airborne lead.

(C) The employer shall ensure that employees do not enter lunchroom facilities with protective work clothing or equipment unless surface lead dust has been removed by vacuuming, downdraft booth, or other cleaning method.

(5) Cleaning of Hygiene Facilities. The employer shall establish, implement, and maintain written methods and schedules to maintain the cleanliness of drinking and washing facilities, change rooms, showers, and lunchrooms required by this subsection.

(j) Medical Surveillance.

(1) General.

(A) The employer shall institute a medical surveillance program :

1. For all employees who are or may be exposed at or above the action level; and

Exception 1: Medical surveillance is not required for an employee who is not exposed to lead at or above the action level for 30 or more days in any 12 consecutive months, and who is not exposed on any day above $10 \mu\text{g}/\text{m}^3$ as an 8-hour TWA, without regard to respirator use.

Exception 2: Medical surveillance is not required for an employee who is not exposed to lead at or above the action level for 15 or more days in any 12 consecutive months, and who is not exposed on any day above $20 \mu\text{g}/\text{m}^3$ as an 8-hour TWA, without regard to respirator use.

2. As interim protection, in accordance with subsection (d)(2), for all employees who perform PSLW.

(B) The employer shall ensure that all medical examinations and procedures are performed by a PLHCP.

(C) The employer shall provide the required medical surveillance including multiple PLHCP review under subsection (j)(3)(C) without cost to employees and at a reasonable time and place.

(D) The employer shall provide complete employee identification information to the PLHCP who performs any services covered under subsections (j)(1), (j)(2) and (j)(3). The employer shall instruct the PLHCP ordering blood lead tests to provide the analyzing laboratory with the employee identification information. Identification information includes:

1. Employee name, date of birth, address, and phone number; and
2. Employer name, address, and phone number.

(2) Blood Lead Testing.

(A) Blood Lead Testing Schedule. The employer shall make available blood lead testing to each employee covered under subsection (j)(1)(A) on the following schedule:

1. Prior to assignment for work covered by subsection (j)(1)(A) or as soon as possible when work is first determined to be covered by subsection (j)(1)(A);

Exception: Blood lead testing is not required prior to assignment to work covered by subsection (j)(1)(A) or when work is first determined to be covered by subsection (j)(1)(A) for an employee who has had a blood lead test in the preceding two months.

2. At least every 2 months for the first 6 months and every 6 months thereafter;
3. At least every 2 months for the first 6 months and every 6 months thereafter, following a change in work task or process resulting in or likely to result in higher exposure to lead;
4. At least every two months for each employee whose last blood lead level was at or above 10 µg/dl but below 20 µg/dl. This frequency shall continue until two consecutive blood lead levels, taken at least 30 days apart, are below 10 µg/dl; and
5. At least monthly for each employee whose last blood lead level was at or above 20 µg/dl, and during the removal period of each employee removed from exposure to lead due to an elevated blood lead level.

(B) Accuracy of Blood Lead Testing. Blood lead testing provided pursuant to this section shall include analysis by a Clinical Laboratory Improvement Amendments (CLIA)-approved laboratory (under the federal CLIA regulations, 42 CFR Part 493).

(C) Employer Notification to the Employee. Within five working days after the receipt of blood lead test results, the employer shall notify in writing each employee :

1. Of that employee's blood lead level;
2. That the standard requires the employer to make medical examinations and consultations available to employees exposed at or above the action level, and as interim protection, to employees performing PSLW, unless an employee's exposure or work is covered by the exception in subsection (j)(1)(A). When they are required, the employer must make medical examinations and consultations available as soon as possible, upon notification by an employee either that the employee has developed signs or symptoms commonly associated with lead intoxication, that the employee desires medical advice concerning the effects of current or past exposure to lead on the employee's ability to procreate a healthy child, or that the employee has demonstrated difficulty breathing during a respirator fit test or during use; and
3. That the standard requires temporary medical removal with Medical Removal Protection benefits when an employee's blood lead level is at or above 30 µg/dl, the last two monthly blood lead levels are at or above 20 µg/dl, or the average of the results of all blood lead tests conducted in the last 6 months is at or above 20 µg/dl, as provided for in subsection (k)(1).

(D) PLHCP's Notification to the Employee. The employer shall ensure that the PLHCP who orders the blood test explains the findings of the blood lead test and notifies the employee of the following:

1. The results of the blood lead test;
2. Any recommended follow-up blood lead testing in accordance with subsection (j)(2)(A) and the timing of that recommended blood lead testing; and
3. If the employee's blood lead level is 20 µg/dl or greater, the recommendation that the employee undergo a medical examination by a PLHCP if the employee has not had a lead-specific medical exam in the preceding 12 months.

(E) Elevated Blood Lead Level Response.

1. Whenever an employee has a blood lead level at or above 10 µg/dl, the employer shall establish and implement a written elevated blood lead level response plan for that employee which describes specific means that will be used to reduce and maintain the employee's blood lead level below 10 µg/dl.

2. Training and instruction shall be provided as needed for an employee who has a blood lead level at or above 10 µg/dl, to correct any employee work practices identified in the elevated blood lead level response plan established for that employee under subsection (j)(2)(E)1.

Exception: A written elevated blood lead level response plan, training and instruction, as specified in subsection (j)(2)(E), are not required when a blood lead level at or above 10 µg/dl is detected only in an employee's blood lead test done prior to their first assignment to work covered under subsection (j)(1)(A).

(3) Medical Examinations and Consultations.

(A) Frequency. The employer shall make available medical examinations and consultations to each employee covered under subsection (j)(1)(A) on the following schedule:

1. As soon as possible for each employee for whom a blood lead test result of 20 µg/dl or greater is received, if no lead-specific medical examination was done for that employee in the preceding 12 months, and at least annually thereafter, until the employee's blood lead level is below 20 µg/dl;
2. Prior to assignment for each employee being assigned for the first time to an area in which 8-hour time-weighted average concentrations of airborne lead are at or above the action level;

Exception 1: Medical examinations and consultations are not required for an employee who is not exposed to lead at or above the action level for 30 or more days in any 12 consecutive months, and who is not exposed on any day above 10 µg/m³ as an 8-hour TWA, without regard to respirator use.

Exception 2: Medical examinations and consultations are not required for an employee who is not exposed to lead at or above the action level for 15 or more days in any 12 consecutive months, and who is not exposed on any day above 20 µg/m³ as an 8-hour TWA, without regard to respirator use.

3. As soon as possible, upon notification by an employee either that the employee has developed signs or symptoms commonly associated with lead intoxication, that the employee desires medical advice concerning the effects of current or past exposure to lead on the employee's ability to procreate a healthy child, or that the employee has demonstrated difficulty in breathing during a respirator fit test or during use; and
4. As soon as possible, and then as medically appropriate for each employee removed from exposure to lead due to elevated blood lead levels in compliance with the provisions of subsection (k)(1), or whose exposure to lead is otherwise limited pursuant to a final medical determination in compliance with the provisions of subsection (k)(2).

(B) Content. Medical examinations made available pursuant to subsection (j)(3)(A) shall include the following elements:

1. A detailed work history and a medical history, with particular attention to past lead exposure (occupational and non-occupational), personal habits (smoking, hygiene), and past gastrointestinal, hematologic, renal, cardiovascular, reproductive and neurological problems;
2. A thorough physical examination, with particular attention to teeth, gums, hematologic, gastrointestinal, renal, cardiovascular, and neurological systems. If requested by an employee, pregnancy testing or laboratory evaluation of male fertility shall be included. Pulmonary status should be evaluated if respiratory protection will be used;
3. A blood pressure measurement;
4. A blood sample and analysis which determines:

- a. Blood lead level;
 - b. Hemoglobin and hematocrit determinations, red cell indices, and examination of peripheral smear morphology;
 - c. Zinc protoporphyrin for each employee whose last blood lead level was at or above 20 µg/dl;
 - d. Blood urea nitrogen; and
 - e. Serum creatinine.
5. A routine urinalysis with microscopic examination; and
6. Any laboratory or other test relevant to lead exposure that the examining PLHCP deems necessary by sound medical practice.

(C) Multiple PLHCP Review Mechanism.

1. If the employer selects the initial PLHCP who conducts any medical examination or consultation provided to an employee under this section, the employee may designate a second PLHCP to review any findings, determinations or recommendations of the initial PLHCP and to conduct such examinations, consultations, and laboratory tests as the second PLHCP deems necessary to facilitate this review.
2. The employer shall promptly notify an employee of the right to seek a second medical opinion after each occasion that an initial PLHCP conducts a medical examination or consultation pursuant to this section. The employer may condition participation in, and payment for, the multiple PLHCP review mechanism upon the employee informing the employer that the employee intends to seek a second medical opinion and initiating steps to make an appointment with a second PLHCP within 15 days after receipt of the foregoing notification or receipt of the initial PLHCP's written medical opinion, whichever is later.
3. If the findings, determinations or recommendations of the second PLHCP differ from those of the initial PLHCP, then the employer and the employee shall ensure that efforts are made for the two PLHCPs to resolve any disagreement.
4. If the two PLHCPs are unable to resolve their disagreement quickly, the employer and employee through their respective PLHCPs shall designate a third PLHCP to review any findings, determinations, or recommendations of the prior PLHCPs and to conduct such examinations, consultations, laboratory tests, and discussions with the prior PLHCPs that the third PLHCP deems necessary to resolve the disagreement of the prior PLHCPs.
5. The employer shall act consistent with the findings, determinations and recommendations of the third PLHCP, unless the employer and the employee reach an agreement which is otherwise consistent with the recommendations of at least one of the three PLHCPs.

(D) Alternate PLHCP Determination Mechanisms. The employer and an employee or authorized employee representative may agree upon the use of any expeditious alternate PLHCP determination mechanism in lieu of the multiple PLHCP review mechanism provided by this section so long as the alternate mechanism otherwise satisfies the requirements contained in this section.

(4) Information Provided to Examining and Consulting PLHCPs.

(A) The employer shall provide the following information to an initial PLHCP conducting a medical examination or consultation under the provisions of this section:

1. A copy of this regulation and its appendices;
2. A description of the affected employee's duties as they relate to the employee's exposure;
3. The employee's exposure level or anticipated exposure level to lead and to any other toxic substance (if applicable);
4. A description of any personal protective equipment used or to be used;
5. Prior blood lead test results; and
6. All prior written medical opinions concerning the employee in the employer's possession or control.
7. A copy of the written elevated blood lead level response plan for that employee as required by subsection (j)(2)(E)1.

(B) The employer shall provide the foregoing information to a second or third PLHCP conducting a medical examination or consultation under this section upon request either by the second or third PLHCP, or by the employee.

(5) PLHCP's Written Medical Report for the Employee.

The employer shall ensure that the examining PLHCP explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of each medical examination performed. The written report shall contain:

- (A) The PLHCP's opinion as to whether the employee has any detected health-related condition that would place the employee's health, including the ability to procreate a healthy child, at increased risk of material impairment from exposure to lead;
- (B) Any recommended special protective measures to be provided to the employee, or recommended limitations to be placed upon the employee's exposure to lead;
- (C) Any recommended limitations upon the employee's use of respirators, including a determination of whether the employee should wear a powered air-purifying respirator instead of a non-powered air-purifying respirator;
- (D) The employee's blood lead test results;
- (E) Any recommended follow-up blood lead testing and medical examinations and the timing of each; and
- (F) The PLHCP's opinion as to whether the employee has any health-related condition, occupational or non-occupational, that dictates further medical examination or treatment.

(6) PLHCP's Written Medical Opinion for the Employer.

- (A) The employer shall obtain a written medical opinion from the examining PLHCP within 30 days of the medical examination. The written opinion shall contain the information required by subsections (j)(5)(A) through (j)(5)(E), except as specified in subsection (j)(6)(B).
- (B) The employer shall instruct the examining PLHCP to not include either in the written opinion to the employer, or in any other means of communication with the employer, findings, including laboratory results, or diagnoses unrelated to the employee's occupational exposure to lead.

(7) Chelation.

(A) The employer shall ensure that any person whom the employer retains, employs, supervises, or controls does not engage in prophylactic chelation of any employee at any time.

(B) If therapeutic or diagnostic chelation is to be performed by any person in subsection (j)(7)(A), the employer shall ensure that it be done by a PLHCP in a clinical setting with thorough and appropriate medical monitoring and that the employee is notified in writing prior to its occurrence.

(k) Medical Removal Protection.

(1) Temporary Removal Due to Elevated Blood Lead Levels.

The employer shall remove an employee from work having an exposure to lead at or above the action level, altering or disturbing any material containing lead at a concentration equal to or greater than 0.5% by weight, or torch cutting any scrap metal, on each occasion that:

(A) The last blood lead test indicates that the employee's blood lead level is at or above 30 µg/dl; or

(B) Effective January 1, 2026, the employee's last two blood lead test results are at or above 20 µg/dl; or

(C) Effective January 1, 2026, the average of the results of all blood lead tests conducted for the employee in the last 6 months is at or above 20 µg/dl; however, an employee need not be removed if the last blood lead test indicates a blood lead level below 15 µg/dl.

(2) Temporary Removal Due to a Final Medical Determination.

(A) The employer shall remove an employee from work having an exposure to lead at or above the action level, altering or disturbing any material containing lead at a concentration equal to or greater than 0.5% by weight, or torch cutting any scrap metal, on each occasion that a final medical determination results in a medical finding, determination, or opinion that the employee has a detected health-related condition which places the employee's health, including the ability to procreate a healthy child, at increased risk of material impairment from exposure to lead.

(B) The phrase "final medical determination" means the written medical opinion on the employee's health status by the examining PLHCP or, where relevant, the outcome of the multiple PLHCP review mechanism or alternate PLHCP determination mechanism used pursuant to the medical surveillance provisions of this section.

(C) Where a final medical determination results in any recommended special protective measures for an employee, or limitations on an employee's exposure to lead, the employer shall implement and act consistent with the recommendation.

(3) Return of the Employee to Former Job Status.

(A) The employer shall return an employee to their former job status:

1. For an employee removed under subsection (k)(1), when two consecutive blood lead tests, taken at least 30 days apart, both indicate that the employee's blood lead level is below 15 µg/dl; and

2. For an employee removed due to a final medical determination, when a subsequent final medical determination results in a medical finding, determination, or opinion that the employee no longer has a detected health-related condition which places the employee's health, including the ability to procreate a healthy child, at increased risk of material impairment from exposure to lead.

(B) For the purposes of this section, the requirement that an employer return an employee to their former job status is not intended to expand upon or restrict any rights an employee has or would have had, absent temporary medical removal, to a specific job classification or position under the terms of a collective bargaining agreement.

(4) Removal of Other Employee Special Protective Measures or Limitations. The employer shall remove any limitations placed on an employee or end any special protective measures provided to an employee pursuant to a final medical determination when a subsequent final medical determination indicates that the limitations or special protective measures are no longer necessary.

(5) Employer Options Pending a Final Medical Determination. Where the multiple PLHCP review mechanism, or alternate PLHCP determination mechanism used pursuant to the medical surveillance provisions of this section, has not yet resulted in a final medical determination with respect to an employee, the employer shall act as follows:

(A) Removal. The employer may remove the employee from exposure to lead, provide special protective measures to the employee, or place limitations upon the employee, consistent with the medical findings, determinations, or recommendations of any of the PLHCPs who have reviewed the employee's health status.

(B) Return. The employer may return the employee to their former job status, end any special protective measures provided to the employee, and remove any limitations placed upon the employee, consistent with the medical findings, determinations, or recommendations of any of the PLHCPs who have reviewed the employee's health status.

Exception 1: If the initial removal, special protection, or limitation of the employee resulted from a final medical determination which differed from the findings, determinations, or recommendations of the initial PLHCP.

Exception 2: If the employee has been on removal status for the preceding eighteen months due to an elevated blood lead level, the employer shall await a final medical determination.

(6) Medical Removal Protection Benefits.

(A) Provision of Medical Removal Protection Benefits. The employer shall provide to an employee up to eighteen (18) months of medical removal protection benefits on each occasion that an employee is removed from exposure to lead or otherwise limited pursuant to this section.

(B) Definition of Medical Removal Protection Benefits. For the purposes of this section, the requirement that an employer provide medical removal protection benefits means that the employer shall maintain the earnings, seniority and other employment rights and benefits of an employee, including the employee's right to their former job status, as though the employee had not been medically removed from the employee's job or otherwise medically limited.

(C) Follow-Up Medical Surveillance During the Period of Employee Removal or Limitation. During the period of time that an employee is medically removed from the employee's job or otherwise medically limited, the employer may condition the provision of medical removal protection benefits upon the employee's participation in follow-up medical surveillance made available pursuant to this section.

(D) Workers' Compensation Claims. If a removed employee files a claim for workers' compensation payments for a lead-related disability, then the employer shall continue to provide medical removal protection benefits pending disposition of the claim. To the extent that an award is made to the employee for earnings lost during the period of removal, the employer's medical removal protection obligation shall be reduced by such amount. The employer shall receive no credit for workers' compensation payments received by the employee for treatment related expenses.

(E) Other Credits. The employer's obligation to provide medical removal protection benefits to a removed employee shall be reduced to the extent that the employee receives compensation for earnings lost during the period of removal either from a publicly or employer-funded compensation program, or receives income from employment with another employer made possible by virtue of the employee's removal.

(F) Employees Whose Blood Lead Levels Do Not Adequately Decline Within 18 Months of Removal. The employer shall take the following measures with respect to any employee removed from exposure to lead due to an elevated blood lead level whose blood lead level has not declined within the past eighteen (18) months of removal so that the employee has been returned to their former job status.

1. The employer shall make available to the employee a medical examination pursuant to this section to obtain a final medical determination with respect to the employee.
2. The employer shall ensure that the final medical determination obtained indicates whether or not the employee may be returned to their former job status, and if not, what steps should be taken to protect the employee's health.
3. Where the final medical determination has not yet been obtained, or once obtained indicates that the employee may not yet be returned to their former job status, the employer shall continue to provide medical removal protection benefits to the employee until either the employee is returned to former job status, or a final medical determination is made that the employee is incapable of ever safely returning to their former job status.
4. Where the employer acts pursuant to a final medical determination which permits the return of the employee to their former job status despite what would otherwise be an unacceptable blood lead level, later questions concerning removing the employee again shall be decided by a final medical determination. The employer need not automatically remove such an employee pursuant to the blood lead level removal criteria provided by this section.

(G) Voluntary Removal or Restriction of an Employee. Where an employer, although not required by this section to do so, removes an employee from exposure to lead or otherwise places limitations on an employee due to the effects of lead exposure on the employee's health-related condition, the employer shall provide medical removal protection benefits to the employee equal to those required by subsections (k)(6)(A) and (B).

(I) Employee Information and Training.

(1) Training Program.

(A) Each employer who has a workplace which falls within the scope of this section shall inform employees with occupational exposure to lead of the content of Appendices A and B of this regulation.

(B) For all employees occupationally exposed to lead, the employer shall provide training covering the purpose and content of, and methods used to comply with, the housekeeping and hygiene requirements specified in subsections (h), (i)(1) and (i)(5). Where applicable, this training shall include how to follow written safe hydration procedures implemented in accordance with the exception to subsection (i)(1)(A). This training shall be provided prior to the time of initial job assignment, and at least annually thereafter.

(C) For the employees listed below, the employer shall provide a training program:

1. For employees who are exposed to lead at or above the action level on any day;
2. For employees for whom the possibility exists of skin or eye irritation from exposure to lead (e.g. lead arsenate, lead azide); and

3. As interim protection, in accordance with subsection (d)(2), for employees who perform PSLW.

(D) The employer shall ensure that all employees covered under subsection (l)(1)(C) participate in the training program, and that the training, and any training materials used, are appropriate to the educational level, literacy level, and language of these employees.

(E) For each employee covered by subsection (l)(1)(C), the employer shall provide initial training covering all content in subsection (l)(1)(F) prior to the time of initial job assignment, and at least annually thereafter.

(F) The employer shall ensure that effective training on the following topics is provided for each employee covered by subsection (l)(1)(C):

1. The content of this standard and its appendices;
2. The specific nature of the operations that could result in exposure to lead at or above the action level, or that constitute PSLW;
3. The purpose and content of, and methods used to comply with, the hygiene requirements specified in subsections (i)(2) through (i)(4);
4. The purpose, proper selection, fitting, use, and limitations of respirators;
5. The purpose and a description of the medical surveillance program and the medical removal protection program;
6. The health effects of exposure to lead (with particular attention to cardiovascular effects), including low-level chronic exposure;
7. The damage caused to both male and female reproductive health by low-level lead exposure, including damage associated with blood lead levels under 5 µg/dl;
8. The employer's duty, as required by subsection (j)(3)(A), to make medical examinations and consultations available to each employee who notifies the employer that they desire medical advice concerning their ability to procreate a healthy child, when the employee is exposed at or above the action level, and as interim protection, to an employee who performs PSLW, unless the employee's exposure or work is covered by the exception in subsection (j)(1)(A);
9. The routes of exposure to lead, including inhalation of airborne lead and ingestion of lead from contaminated hands and other surfaces;
10. The possibility that lead contamination brought into personal vehicles or the home on an employee's clothes, shoes, and body will endanger the health of household members, especially that of young children and pregnant people;
11. The recommendation to shower immediately upon returning home from work to minimize take-home lead exposure;

Note: When employees are exposed above the PEL, the employer must provide shower facilities and ensure that employees shower at the end of the work shift, in accordance with subsection (i)(3).

12. The engineering controls and work practices associated with the employee's job assignment;
13. The contents of any compliance plan in effect;

14. Instructions that chelating agents should not routinely be used to remove lead from the body and should not be used at all except by a PLHCP; and

15. The employee's right of access to their exposure and medical records under section 3204.

(2) Access to Information and Training Materials.

(A) The employer shall make a copy of this standard and its appendices readily available to all affected employees including employees exposed below the action level.

(B) The employer shall provide, upon request, all materials relating to the employee information and training program to the Chief.

(m) Communication of Hazards.

(1) Hazard Communication -- General.

(A) Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS) (section 5194) for lead.

(B) In classifying the hazards of lead at least the following hazards are to be addressed: cardiovascular effects; reproductive/developmental toxicity; central nervous system effects; kidney effects; blood effects; and acute toxicity effects.

(C) Employers shall include lead in the hazard communication program established to comply with the HCS (section 5194). Employers shall ensure that each employee has access to labels on containers of lead and to safety data sheets, and is trained in accordance with the requirements of HCS and subsection (l) of this section.

(2) Signs.

(A) The employer shall post a warning sign:

1. in each work area where employee exposures are at or above the action level; and
2. as interim protection, in accordance with subsection (d)(2), in each work area where PSLW is performed.

(B) The sign shall bear the following legend:

DANGER
LEAD WORK AREA
MAY DAMAGE FERTILITY OR THE UNBORN CHILD
CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM
DO NOT EAT, DRINK OR SMOKE IN THIS AREA

(C) The employer shall ensure that no statement appears on or near any sign required by this subsection (m)(2) which contradicts or detracts from the meaning of the required sign.

(D) The employer shall ensure that signs required by this subsection (m)(2) are illuminated and cleaned as necessary so that the legend is readily visible.

(E) The employer may use signs required by other statutes, regulations, or ordinances in addition to, or in combination with, signs required by this subsection (m)(2).

Exception: The employer is not required to post the specified warning sign in a work area where employees are exposed to lead at or below $50 \mu\text{g}/\text{m}^3$ without regard to the use of respirators where the employer has implemented written safe hydration procedures in accordance with the exception to subsection (i)(1)(A).

(F) The employer shall ensure that warning signs required by subsection (m)(2) are in a language understandable to employees.

(n) Recordkeeping.

(1) Exposure Monitoring.

(A) The employer shall establish and maintain an accurate record of all monitoring required in subsection (d).

(B) This record shall include:

1. The date(s), number, duration, location and results of each of the samples taken, including a description of the sampling procedure used to determine representative employee exposure where applicable;
2. A description of the sampling and analytical methods used and evidence of their accuracy;
3. The type of respiratory protective devices worn, if any;
4. The name, another unique identifier (such as date of birth or employee identification number), and job classification of the employee monitored and of all other employees whose exposure the measurement is intended to represent; and
5. The work operations performed by the monitored employees and the workplace conditions under which they were performed, including the processes, types of material, control methods, and work practices used, as well as the environmental conditions prevailing during the monitored operations.

(C) The employer shall maintain these monitoring records for at least 40 years or for the duration of employment plus 20 years, whichever is longer.

(2) Written Compliance Program Review.

Records of the semi-annual revision and update of the employer's written compliance program, required under subsection (e)(2)(A), shall include the name of the person(s) who reviewed the program, the date the review was completed, and a summary of the revisions and updates to the program. The records shall be retained for three years.

(3) Medical Surveillance.

(A) The employer shall establish and maintain an accurate record for each employee subject to medical surveillance as required by subsection (j).

(B) This record shall include:

1. The name, another unique identifier (such as date of birth or employee identification number), and description of the duties of the employee;

2. A copy of the PLHCP's written opinions;
3. Results of any monitoring of exposure to airborne lead done for that employee and the representative exposure level supplied to the PLHCP; and
4. Any employee medical complaints related to exposure to lead.

(C) The employer shall keep, or ensure that the examining PLHCP keeps, the following medical records:

1. A copy of the medical examination results including medical and work history required under subsection (j).
2. A description of the laboratory procedures and a copy of any standards or guidelines used to interpret the test results or references to that information.
3. A copy of the results of blood lead testing.

(D) The employer shall maintain or ensure that the PLHCP maintains those medical records for at least 40 years, or for the duration of employment plus 20 years, whichever is longer.

(4) Written Elevated Blood Lead Level Response Plans.

Written elevated blood lead level response plans, required under subsection (j)(2)(E), shall be retained for three years.

(5) Medical Removals.

(A) The employer shall establish and maintain an accurate record for each employee removed from current exposure to lead pursuant to subsection (k).

(B) Each record shall include:

1. The name and another unique identifier (such as date of birth or employee identification number) of the employee;
2. The date on each occasion that the employee was removed from current exposure to lead as well as the corresponding date on which the employee was returned to their former job status;
3. A brief explanation of how each removal was or is being accomplished; and
4. A statement with respect to each removal indicating whether or not the reason for the removal was an elevated blood lead level.

(C) The employer shall maintain each medical removal record for at least the duration of an employee's employment.

(6) Training.

(A) After conducting any training required by this section, the employer shall prepare a record that indicates the name and job classification of each employee trained, the date of the training, the name of the person(s) who conducted the training, and the topic(s) of the training.

(B) Training records shall be maintained for three years.

(7) Availability.

(A) The employer shall make available upon request all records required to be maintained by this subsection to the Chief and the Director for examination and copying.

(B) Environmental monitoring, medical removal, and medical records required by this section shall be provided upon request to employees, designated representatives, and authorized representatives of the Chief in accordance with section 3204. Medical removal records shall be provided as prescribed by section 3204 for monitoring records.

(8) Transfer of Records.

(A) Whenever the employer ceases to do business, the successor employer shall receive and retain all records required to be maintained by subsection (n).

(B) Whenever the employer ceases to do business and there is no successor employer to receive and retain the records required to be maintained by this section for the prescribed period, these records shall be transmitted to the Director.

(C) At the expiration of the retention period for the records required to be maintained by this section, the employer shall notify the Director at least 3 months prior to the disposal of such records and shall transmit those records to the Director if requested within the period.

(D) The employer shall also comply with any additional requirements involving the transfer of records set forth in section 3204.

(o) Observation of Monitoring.

(1) Employee observation. The employer shall provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to lead conducted pursuant to subsection (d).

(2) Observation procedures.

(A) Whenever observation of the monitoring of employee exposure to lead requires entry into an area where the use of respirators, protective clothing or equipment is required, the employer shall provide the observer with and ensure the use of such respirators, clothing and equipment, and shall require the observer to comply with all other applicable safety and health procedures.

(B) Without interfering with the monitoring, observers shall be entitled to:

1. Receive an explanation of the measurement procedures;
2. Observe all steps related to the monitoring of lead performed at the place of exposure; and
3. Record the results obtained or receive copies of the results when returned by the laboratory.

(p) Appendices.

The information contained in the appendices to this section is not intended to create any additional obligations not otherwise imposed by this standard nor detract from any existing obligation.

Credits

Note: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code; and Federal Register Volume 77, Number 58 (Monday, March 26, 2012) Pages 17574-17896.

History

1. Change without regulatory effect renumbering section 5216 and appendices A-D to section 5198 filed 2-16-2000 pursuant to section 100, title 1, California Code of Regulations (Register 2000, No. 7). For prior history, see Register 87, No. 51.
2. Change without regulatory effect amending subsection (j)(3)(A) filed 6-26-2000 pursuant to section 100, title 1, California Code of Regulations (Register 2000, No. 26).
3. Amendment of subsection (f)(2)(A) filed 7-31-2003; operative 8-30-2003 (Register 2003, No. 31).
4. Amendment of subsection (f)(3)(A) and new subsections (f)(3)(C)-(D) filed 3-6-2007; operative 3-6-2007. Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(3) (Register 2007, No. 10).
5. Change without regulatory effect amending subsection (f)(2)(A) filed 12-1-2008 pursuant to section 100, title 1, California Code of Regulations (Register 2008, No. 49).
6. Amendment of subsections (j)(2)(B), (j)(2)(D), (k)(1) and (k)(3)(A)1. filed 1-18-2012; operative 1-18-2012 pursuant to Labor Code section 142.3(a)(4)(C). Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(3) (Register 2012, No. 3).
7. Amendment of subsection (j)(2)(D)2. filed 9-4-2012; operative 10-4-2012 (Register 2012, No. 36).
8. Amendment of subsection (g)(2)(G), new subsections (g)(2)(G)1.-2., repealer and new subsections (m)-(m)(1)(B), new subsection (m)(1)(C), amendment of subsection (m)(2)(A), repealer and new subsection (m)(2)(B), new subsections (m)(2)(C)-(E), amendment of Note and amendment of Appendix B, item XI. filed 5-6-2013; operative 5-6-2013 pursuant to Labor Code section 142.3(a)(4)(C). Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(4) (Register 2013, No. 19).
9. Amendment of subsection (g)(2)(G), new subsections (g)(2)(G)1.-2., repealer and new subsections (m)-(m)(1)(B), new subsection (m)(1)(C), amendment of subsection (m)(2)(A), repealer and new subsection (m)(2)(B), new subsections (m)(2)(C)-(E), amendment of Note and amendment of Appendix B, item XI. refiled 11-6-2013; operative 11-6-2013 pursuant to Labor Code section 142.3(a)(4)(C). Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(4) (Register 2013, No. 45).
10. Repealer of 11-6-2013 order by operation of law 5-6-2014 pursuant to Labor Code 142.3 (Register 2014, No. 19).
11. Amendment of subsection (g)(2)(G), new subsections (g)(2)(G)1.-2., repealer and new subsections (m)-(m)(1)(B), new subsection (m)(1)(C), amendment of subsection (m)(2)(A), repealer and new subsection (m)(2)(B), new subsections (m)(2)(C)-(E), amendment of Note and amendment of Appendix B, item XI. filed 5-5-2014; operative 5-6-2014 pursuant to Government Code section 11343.4(b)(3) (Register 2014, No. 19).
12. Amendment of section and Note filed 4-8-2024; operative 1-1-2025 pursuant to Government Code section 11343.4(b)(2) (Register 2024, No. 15).

- [Section 5198 - Appendix A](#)
- [Section 5198 - Appendix B](#)
- [Section 5198 - Appendix C](#)
- [Section 5198 - Appendix D](#)

 [Go Back to Article 109 Table of Contents](#)