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Requirements for Low Lead Plumbing Products in California

Introduction

The Department of Toxic Substances Control (DTSC) prepared this fact sheet to describe the legal requirements for reducing lead in plumbing. The requirements specifically apply to pipes, pipe or plumbing fittings, fixtures, solder, or flux intended to convey or dispense water for human consumption.

Lead is a common additive in plumbing materials such as lead solder, brass, bronze, and other alloys. Any plumbing product containing lead that is in contact with water is a potential source of drinking water contamination.

Why is lead in plumbing products being targeted?

Lead primarily enters drinking water from the corrosion of plumbing materials that contain lead and are in contact with the water. Lead that leaches from household pipes and faucets into drinking water cannot be easily detected nor removed.

Exposure to lead in drinking water can cause a variety of adverse health effects, especially in children and infants. Their exposure to high levels of lead in drinking water can result in delays in physical or mental development, reduced intelligence, learning disabilities, attention deficit disorder, behavioral problems, stunted growth, impaired hearing and kidney damage.

For adults, high levels of exposure to lead in drinking water can result in kidney problems, high blood pressure, nerve disorders, fertility problems, muscle and joint pain, irritability, memory and concentration problems. Furthermore, pregnant women can pass lead contained in their bodies to their fetuses.

What are California's low lead plumbing product requirements?

Concerned about lead contamination of drinking water, the California Legislature passed several laws to reduce the lead content in drinking water distribution products.

- Specifically, state law prohibits the use of any pipe, pipe or plumbing fitting or fixture, solder, or flux that is not "lead free", as defined in statute, in the installation or repair of





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any public water system or any plumbing in a facility providing water for human consumption. (*Health & Saf. Code*, § 116875, subd.(a).)

- State law prohibits any person engaged in the business of selling plumbing supplies, except manufacturers, from selling solder or flux that is not “lead free” as defined in statute. (*Health & Saf. Code*, § 116875, subd.(c).)
- State law prohibits the introduction into commerce of any solder or flux that is not “lead free” unless the solder or flux bears a label stating that it is illegal to use the solder or flux in the installation or repair of any plumbing providing water for human consumption. (*Health & Saf. Code*, § 116875, subd.(d).)

Additionally, beginning January 1, 2010, state law prohibits the introduction into commerce of any pipe, pipe or plumbing fitting, or fixture intended to convey or dispense water for human consumption that is not “lead free” as defined in statute. (*Health & Saf. Code*, § 116875, subd.(b), effective January 1, 2010 as specified in SB 1334, Stat. 2008, c.580.)

For a complete description of the lead-in-plumbing requirements, you should consult the laws referenced above.

What are the maximum allowable lead limits in plumbing products?

Before January 1, 2010, the maximum allowable lead content in “lead free” pipes, pipe or plumbing fittings, fixtures, solder, or flux was as follows:

- 0.2 percent lead in solder and flux;
- 8 percent lead in pipes and pipe fittings; and
- 4 percent lead by dry weight in plumbing fittings and fixtures.

After January 1, 2010, the maximum allowable lead content in “lead-free” pipes, pipe or plumbing fittings, fixtures, solder, or flux intended to convey or dispense water for human consumption through drinking or cooking is as follows:

- 0.2 percent lead in solder and flux;
- 0.25 percent lead in wetted surfaces of pipes, pipe fittings, plumbing fittings and fixtures, as determined by a weighted average.

Note that the “weighted average lead content” of a pipe and pipe fitting, plumbing fitting, and fixture is calculated by using the following formula: the percentage of the lead content within each component that comes into contact with water shall be multiplied by the percent of the total wetted surface of the entire pipe and pipe fitting, plumbing fitting, or fixture represented in each component containing lead.

For purposes other than manufacturing, industrial processing, or to convey or dispense water for human consumption, the maximum allowable lead content in “lead free” is as follows:





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- 0.2 percent lead in solder and flux;
- 8 percent lead in pipes and pipe fittings;
- 4 percent lead by dry weight plumbing fittings and fixtures.

Which product category is covered by the law?

State law prohibits the use of any pipe, pipe or plumbing fitting or fixture, solder, or flux that is not lead free in any public water system or facility providing water for human consumption.

Additionally, state law prohibits the introduction into commerce of any solder or flux that is not lead free unless the solder or flux bears a label stating that it is illegal to use the solder or flux in the installation or repair of any plumbing providing water for human consumption.

Beginning January 1, 2010, state law prohibits the introduction into commerce of any pipe, pipe or plumbing fitting, or fixture intended to convey or dispense water for human consumption through drinking or cooking that is not “lead free” as defined in statute. This includes kitchen faucets, bathroom faucets, and any other end-use devices intended to convey or dispense water for human consumption through drinking or cooking. However, service saddles, backflow preventers for non-potable services such as irrigation and industrial, and water distribution main gate valves that are two inches in diameter and above are excluded.

Who does this apply to?

If you use or introduce into commerce any pipe, pipe or plumbing fittings or fixtures, solder, or flux intended to convey or dispense water for human consumption, your products must comply with the law. Additionally, if you introduce into commerce solder or flux, your products must comply with the law.

Are there any certification requirements?

All pipe, pipe or plumbing fixtures, solder or flux must be certified by an independent American National Standards Institute (ANSI) accredited third party, including, but not limited to, National Sanitation Foundations (NSF) International, as being in compliance with the “lead-free” standards. The certification must include testing of materials in accordance with the protocols developed by DTSC.

What information will DTSC provide?

Currently, DTSC has ongoing discussions with key stakeholders in California and nationwide, including industry, third party certifiers, and other government agencies to provide information on testing protocols for lead content certification.

The laws establish lead plumbing monitoring and compliance testing as a part of DTSC’s ongoing program to reduce toxic substances from the environment. DTSC annually selects up to 75 drinking water faucets or other drinking water plumbing fittings and fixtures from locations





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that are readily accessible to the public at either retail or wholesale sources. These are tested and evaluated to determine compliance with the law (*Health & Saf. Code, § 116875*). The results are posted annually on DTSC's Web site and transmitted to the California Department of Public Health.

Additional Information

Please visit our Web site for additional information on "Lead in Plumbing" at:
<http://www.dtsc.ca.gov/PollutionPrevention/LeadInPlumbing.cfm>.

We also maintain an e-mail list (ListServ) that you may sign up for, to receive updates from DTSC regarding Lead in Plumbing.

For more information, call the Regulatory Assistance Officers at: (800) 72TOXIC (1-800-728-6942) or (916) 255-3618 if you are calling from outside of California. You also can reach us by sending an email to leadinplumbing@dtsc.ca.gov.

This fact sheet is intended as a basic overview and guidance document for low lead plumbing products requirements in California. It does not replace or supersede federal or state laws.

