WHAT IS THE LEAD BAN?

On June 19, 1986, Congress enacted the Safe Drinking Water Act Amendments of 1986 (P.L. 99-339). Two key sections of this law constitute the "lead ban." The provisions of these sections are as follows:

Section 1417 (which amends the Safe Drinking Water Act (SDWA)):

- Prohibition on use of pipe, solder, or flux in public water systems that is not "lead free";
- Special public notice requirements for lead;
- State enforcement of prohibition and special public notice for lead; and
- Definition of "lead free" materials.

Section 109 (which does not amend SDWA):

- Ban on lead water pipes, solder, and flux in Veterans' Administration and Department of Housing and Urban Development insured or assisted property;
- Designation of lead solder as a hazardous substance when solder contains more 0.2 percent lead; and
- Requirements for warning labels on lead solder.

WHY A BAN ON LEAD?

Most people understand that the consumption of lead can be very dangerous. Unfortunately, lead is present in many places — in air, food, dust, dirt, and in drinking water. Studies have shown that we receive an average of 15 to 20 percent of our total lead intake from drinking water. Studies also show that the primary source of lead in drinking water is not from the main public water source — that is, the lake, river, reservoir, or well — but rather, the lead comes from our own plumbing and plumbing fixtures.

All people are susceptible to the dangers of lead contamination, but especially children. ***Children*** are particularly sensitive because their bodies are still developing and they absorb and retain more lead than adults. Even at very low levels of lead exposure, children can experience reduced I.Q. levels, impaired learning and language skills, loss of hearing, and reduced attention spans and poor classroom performance. At higher levels, lead can cause damage to the brain and central nervous system, interfering with both learning and physical growth. ***Women*** of child-bearing age are also at risk. Lead can cause impaired development of the fetus, premature births, and reduced birth weights, as well as fertility problems and miscarriages. ***Men*** are at risk of increased blood pressure from exposure to too much lead.

WHO IS AFFECTED BY THE LEAD BAN?

The lead ban affects all public water systems and virtually every citizen. The following sections explain how particular aspects of the lead ban affect a wide variety of people.

PLUMBING MUST BE "LEAD FREE"

The law states that only "lead free" pipe, solder, or flux may be used in the installation or repair of (1) public water systems, or (2) any plumbing in a residential or non-residential facility providing water for human consumption, which is connected to a public water system.

Thus, not only all public water systems, but anyone else that intends to install or repair drinking water plumbing that is connected to a public water system — including plumbers, contractors, and private homeowners — must use "lead free" materials. The term "lead free" means that solders and flux may not contain more than 0.2 percent lead, and that pipes and pipe fittings may not contain more than 8.0 percent lead.

This prohibition was effective on June 19, 1986.

SYSTEMS MUST NOTIFY THE PUBLIC
The law also requires that each public water system identify and notify persons that may be affected by lead contamination of their drinking water. This notice was intended to inform the public about the possibility of lead contamination due either to (1) the lead content in the construction materials of their public water distribution systems, or (2) if a water supply is corrosive enough to cause the leaching of lead from plumbing materials.

Congress established the public notice requirement because regulation of the public water systems alone cannot solve the lead problem. Public education (i.e., the notice) is also needed, because even if the public water system does all it can to reduce lead levels, drinking water may still be contaminated by lead from household plumbing or plumbing fixtures.

The Environmental Protection Agency (EPA) was made responsible for developing the manner and form of this notice. EPA published the requirements and details of the special public notice for lead in the *Federal Register* on October 28, 1987 (52 FR 41534).

As required by the law, the lead notices must provide a clear and readily understandable explanation of:

- Potential sources of lead in drinking water;
- Potential adverse health effects;
- Reasonably available methods of mitigating known or potential lead content in drinking water;
- Any steps the public water system is taking to mitigate lead content in drinking water; and
- The necessity of seeking alternative water supplies, if any.

The notice should have appeared already, either in your local newspaper, with your water bill, or in the mail. If your place of employment has its own drinking water supply (that is, if it is by definition and regulation a "public water system"), then you should have received some form of the notice at work as well.

All public water systems were required to provide notice beginning no later than June 19, 1988.

STATES MUST ENFORCE LAW
The states are required to enforce both the general prohibition on lead materials and the public notice requirements for water suppliers. **States must enforce the lead ban** through state or local plumbing codes, or by such other means of enforcement that the states determine to be appropriate. **States must enforce the public notice requirement.** The first step in this process is usually for the state to request the public water systems to submit proof that the notice has been released.

Both the lead ban and the public notice requirements were to be enforced in all states beginning no later than June 19, 1988. If the state does not enforce these two requirements, the EPA may withhold up to 5 percent of Federal grant funds available to that state for its State Public Water System Supervision Program.

NO LEAD IN VA/HUD HOMES
The lead ban also affects potential home buyers. The law prohibits the Department of Housing and Urban Development (HUD) and the Veterans' Administration (VA) from insuring or guaranteeing a mortgage, or from furnishing assistance for a newly constructed residence, unless the new residence has a potable water system that has "lead free" pipe, solder, and flux.

This prohibition was effective on June 19, 1988.

LEAD SOLDER IS HAZARDOUS ... READ THE WARNING LABEL
Manufacturers, distributors, and sellers of lead plumbing materials are also affected by the lead ban. The law amended two sections of the Federal Hazardous Substances Act.

First, the law was amended to state that any solder with a lead content greater than 0.2 percent is a **hazardous substance. Second**, it now requires that any lead solder, which is not "lead free" and which is introduced or delivered for introduction into interstate commerce, must prominently display a **warning label.** The label must state the lead content of the solder and must warn that the use of such solder in the making of joints or fittings in any private or public potable water supply system is **prohibited.**

This requirement was effective on June 19, 1988.

WHAT SHOULD YOU DO?

IF your home or apartment was built, or if your plumbing was repaired **after June 19, 1986,** only materials that are "lead free" should have been used.

- **FIRST** check your plumbing. Lead is a dull-gray metal that is soft enough to be easily scratched with a housekey. Also, look for copper pipes; lead solder is commonly used with copper piping, but a special test kit is necessary to prove if the solder used contains lead.
- **SECOND,** if you determine or suspect that lead was used, report the violation to the state and local enforcement agencies. Your state drinking water program is usually located in the state capital (or another major city), and is often part of the Department of Health or Environmental Regulation. Consult the blue pages of your local phone book for the proper address and phone number. If you need further assistance locating your State public water system official, contact EPA's Safe Drinking Water Hotline. **Also,** contact the builder, contractor, or plumber immediately and request that they remedy the situation.
- **THIRD,** get your tapwater tested. Locate a certified laboratory in your area and be sure to follow the proper EPA testing protocol. The protocol is available from the Safe Drinking Water Hotline or the states. A list of state certified laboratories can be obtained from your state's laboratory certification officer. The Safe Drinking Water Hotline can provide you with the name, address, and phone number of your lab certification officer.
- **FOURTH,** if you need legal assistance regarding the enforcement of the lead ban, contact your state drinking water program and/or an attorney
- **FINALLY,** until you are certain that you do not have a problem, flush your taps before use and only use the COLD tap for drinking and cooking. In order to conserve water, you may want to use the flushed water for other household uses, such as washing dishes or watering plants. You may also want to keep a bottle or jug of flushed water in your refrigerator for drinking and cooking; this will help reduce the amount of flushing.

IF your home or apartment was built, or if your plumbing was repaired **before June 19, 1986,** lead materials may have been used. Even though the materials were legally installed, they may present a hazard to your health, particularly in buildings that are less than five years old. Studies have shown that lead in solder tends to leach out at the highest levels during the first five years after installation of the pipe.

- **FIRST,** check your plumbing (as above).
- **SECOND,** if you determine or suspect that lead was used, get your tapwater tested by a competent laboratory (as above). The results may indicate that some type of remediation is necessary.
- **FINALLY,** until you are certain that you do not have a problem, flush your taps before use and only use the COLD tap for drinking and cooking (as above).

IF you intend to repair your plumbing (that is, plumbing that supplies drinking water), read the label on the materials to ensure they are "lead free."

FOR MORE INFORMATION

For more information on the lead ban and on the overall problem with lead contamination of drinking water, you may want to obtain the following:

Lead and Your Drinking Water. Available from: U.S. Environmental Protection Agency, Office of Drinking Water, 401 M Street, SW, Washington, DC, 20460; or call the Safe Drinking Water Hotline at (800) 426-4791 or (202) 382-5533.

The Lead Solder Ban: Its Effect on the Plumbing Industry. Available from: National Association of Plumbing, Heating, and Cooling Contractors (NAPHCC) Educational Foundation, 180 S. Washington Street, Suite 50, Falls Church, Va, 22046; or call at (800) 533-7694 or (703) 237-8100.

Lead in School Drinking Water. (GPO-055-000-00281-9) Available for $3.25. Send check or money order to: Superintendent of Documents, U.S. Government Printing Office, Washington, DC, 20460; or order by calling (202) 783-3238.

For specific information on the Safe Drinking Water Act, the lead ban, the special public lead notice, or other regulatory and policy issues, write:

U.S. Environmental Protection Agency
Office of Drinking Water
401 M Street, SW
Washington, DC 20460

Or call: The Safe Drinking Water Hotline
800-426-4791 or 202-382-5533

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