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Channel 13 News Video



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No Lead Legislation... Now A Reality!!

S. 3874

One Hundred Eleventh Congress
of the United States of America

AT THE SECOND SESSION

*Begun and held at the City of Washington on Tuesday,
the fifth day of January, two thousand and ten*

An Act

To amend the Safe Drinking Water Act to reduce lead in drinking water.

*Be it enacted by the Senate and House of Representatives of
the United States of America in Congress assembled,*

SECTION 1. SHORT TITLE.

This Act may be cited as the “Reduction of Lead in Drinking Water Act”.

SEC. 2. REDUCING LEAD IN DRINKING WATER.

(a) IN GENERAL.—Section 1417 of the Safe Drinking Water Act (42 U.S.C. 300g–6) is amended—

(1) by adding at the end of subsection (a) the following:

“(4) EXEMPTIONS.—The prohibitions in paragraphs (1) and (3) shall not apply to—

“(A) pipes, pipe fittings, plumbing fittings, or fixtures, including backflow preventers, that are used exclusively for nonpotable services such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where the water is not anticipated to be used for human consumption; or

“(B) toilets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower valves, service saddles, or water distribution main gate valves that are 2 inches in diameter or larger.”; and

(2) by amending subsection (d) to read as follows:

“(d) DEFINITION OF LEAD FREE.—

“(1) IN GENERAL.—For the purposes of this section, the term ‘lead free’ means—

“(A) not containing more than 0.2 percent lead when used with respect to solder and flux; and

“(B) not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures.

“(2) CALCULATION.—The weighted average lead content of a pipe, pipe fitting, plumbing fitting, or fixture shall be calculated by using the following formula: For each wetted component, the percentage of lead in the component shall be multiplied by the ratio of the wetted surface area of that component to the total wetted surface area of the entire product to arrive at the weighted percentage of lead of the component. The weighted percentage of lead of each wetted component shall be added together, and the sum of these weighted percentages shall constitute the weighted average lead content of the product. The lead content of the material used to produce S. 3874—2

wetted components shall be used to determine compliance with paragraph (1)(B). For lead content of materials that are provided as a range, the maximum content of the range shall be used.”.

(b) EFFECTIVE DATE.—The provisions of subsections (a)(4) and (d) of section 1417 of the Safe Drinking Water Act, as added by this section, apply beginning on the day that is 36 months after the date of the enactment of this Act.

The conversion from Leaded brass to No-Lead brass and how it affects you.



Underground brass (per AWWA C800) currently contains 5 percent Lead

Lead is added in the smelting process along with 85% copper, 5% tin and 5% zinc.



NSF/ANSI 61 Annex F Requirement

- ◎ This new requirement reduces the allowable lead extracted from test bodies from 15 ppb to 5 ppb.
- ◎ Annex F Effective Date – 7/1/2012
- ◎ Previous NSF/ANSI 61 requirement was formed in 2007.

Why is there Lead in underground brass?

The main reason lead is in brass is to make the brass pressure tight. In the foundry process lead is the last element to solidify and therefore seeks and fills the microscopic voids (porosity) in the brass.

Lead also acts as a lubricant during the machine operation allowing for easier machining and longer tool life.

Lead also gives brass ductility so that it bends before it breaks.



What does No-Lead mean?

- ◎ The Safe Drinking Water Act (SDWA) defines No-Lead or Lead Free brass as a weighted average Lead content $\leq .25\%$ for wetted surfaces
- ◎ Federal Law 111-380 will eliminate brass products from the Water Works industry which do not satisfy the .25 ppb or less wetted surface requirements.



What will be replacing Lead?

Bismuth and/or Selenium are added to copper, tin and zinc and react similar to lead in the brass although not identical.

No-Lead brass will have trace amounts of Lead less than or equal to .25 of one percent by weight.



Besides Lead, what differences are there between Leaded and No-Lead brass?

You will not see a physical difference between Leaded and No-Lead brass other than a manufacturer's mark on each component that touches water. Most manufacturers will designate No-Lead brass with a cast "NL" on each component.

One specific difference between leaded and no-lead brass is ductility and machine ability. No-lead brass is less ductile and while machining it, tools wear faster.



Will installation instructions change?

No!

Installation instructions will not change, however No-Lead brass is still brass and therefore softer than iron so care should be taken when ever wrenching and handling No-Lead brass valves and fittings.



Why can't we just take the lead out of the current brass?

Once lead is added to the smelting process it cannot be taken out. Dilution is the only way to reduce the percentage of lead in this brass and this is not practical as the other three elements would be skewed.



Where will No (Low)-Lead brass come from?

No-Lead brass will have to be smelted just as Leaded brass is today, only we won't be able to use existing scrap brass that contains lead.



What is the cost difference between leaded and no-lead brass?

No-lead brass has been running 30 to 50 percent more than leaded brass. This percentage is expected to be greater once more No-Lead brass is required and less Leaded brass is manufactured, as there currently is no scrap stream for No-Lead brass.



Who monitors the manufacturers of No-Lead brass to be sure your getting what is required by law?

AWWA has added No-Lead brass alloys to the C800 standard for underground brass.

ASTM/NSF61 requires that each manufacturer have each of their products tested and certified by an independent laboratory and listed on the certifiers web site.



Listed below are six accredited agencies able to provide ANSI/NSF 61 certification.

NSF 61 ANSI Accredited Labs

NSF International	http://www.nsf.org/Certified/PwsComponents/
Underwriters Laboratories Inc	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm
Truesdail Laboratories Inc.	http://www.truesdail.com/index.html
CSA International	http://directories.csa-international.org/
IAPMO	http://pld.iapmo.org/
WQA	http://www.wqa.org/



When will all states have to comply with No-Lead legislation?

California and Vermont No-Lead laws went in to effect January 1st, 2010

Maryland No-Lead law goes into effect January 1st, 2012

Federal Public Law 11-380 goes into effect January 4th, 2014.

Individual cities throughout the US are in the process of or have already converted to No-Lead.



Is any underground brass exempt from this requirement?

Yes!

Brass saddles do not have to meet this requirement as No-Lead saddles are not ductile enough to expand and contract when attached to water mains which could have excessive pressure fluctuations.



When will manufactures be ready to supply No-Lead brass to the entire industry?

AY McDonald, Ford Meter Box, Mueller, and Cambridge Brass in Canada are all currently supplying No-Lead brass to all that have switched to it and are ratcheting up inventories in preparation for 2014.

At some point prior to 2014 manufacturers will stop shipping Leaded brass to insure all will have sufficient inventory of No-Lead brass starting January, 2014.



Will manufacturers accept returns of excess Leaded brass inventories before or after 2014?

No!

Leaded brass requirements will fall off sharply the closer we get to 2014 and Leaded brass used by manufacturers will be a fraction of what it is today.



How do I order No-Lead brass product today?

Manufacturer's model numbers will change with specific designation for No-Lead product.

i.e. AY McDonald current Leaded brass model numbers will have a "7" added to the prefix of each model number. 4758-22 $\frac{3}{4}$ " will become 74758-22 $\frac{3}{4}$ ".



Questions & Answers...

Thank You For Being Here!

A.Y. McDonald Mfg. Co.







