



# **Lead-Free Definition Under the Safe Drinking Water Act**

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Stakeholder Meeting  
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# Overview

## Overview:

- Current Safe Drinking Water Act (SDWA) Section 1417 Requirements
- Reduction of Lead in Drinking Water Act Amendments
- Next steps



# Current SDWA Requirements

- SDWA 1417(a)(1)(A)
  - In general. No person may use any pipe, pipe or plumbing fitting or fixture, any solder, or any flux, after June 19, 1986, in the **installation or repair** of:
    - (i) any public water system; or
    - (ii) any plumbing in a residential or nonresidential facility providing water for human consumption,
      - that is not lead free (within the meaning of subsection (d))
- The use prohibition in SDWA also applies to entities other than public water systems (PWS)
- PWS includes collection, treatment and storage in addition to distribution facilities under SDWA



# Current SDWA Requirements

- SDWA 1417(a)(3): Effective 2 years after Aug 6, 1996, it shall be unlawful –
  - (A) for any person to **introduce into commerce** any pipe, or any pipe or plumbing fitting or fixture, that is not lead free, except for a pipe that is used in manufacturing or industrial processing;
  - (B) for any person engaged in the business of selling plumbing supplies; except manufacturers, to sell solder or flux that is not lead free; or
  - (C) for any person to introduce into commerce any solder or flux that is not lead free unless the solder or flux bears a prominent 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



# Current SDWA Requirements

- **SDWA 1417(b) State Enforcement**

(1) Enforcement of Prohibition – The requirements of subsection (a)(1) shall be enforced in all States effective 24 months after the enactment of this section. States shall enforce such requirements through State or local plumbing codes, or other such means of enforcement as the State may determine to be appropriate.

- **SDWA 1417(c) Penalties**

- If the Administrator determines that a State is not enforcing the requirements of subsection (a) as required pursuant to subsection (b), the Administrator may withhold up to 5 percent of Federal funds available to that State for State program grants under 1443(a).



# Current SDWA Requirements

- 1417(d) Definition of lead free – For purposes of this section, the term “lead free” -
  - (1) when used with respect to solders and flux refers to solder and flux containing not more than 0.2 percent lead;
  - (2) when used with respect to pipes and pipe fittings refers to pipe and pipe fittings containing not more than 8.0 percent lead, and
  - (3) when used with respect to plumbing fittings and fixtures, refers to plumbing fittings and fixtures in compliance with standards established in accordance with subsection (e)
  - NOTE: EPA recognized in a August 22, 1997 Federal Register notice that the standard for lead free plumbing fittings and fixtures had been established in Section 9 of NSF/ANSI Standard 61



# Reduction of Lead in Drinking Water Act of 2011

- Amends SDWA Section 1417 – Prohibition on Use and Introduction into Commerce of Lead Pipes, Solder and Flux
  - Modifies the applicability of the prohibitions by creating exemptions
  - Changes the definition of “lead-free” by reducing lead content from 8% to a weighted average of not more than 0.25% in the wetted surface material (primarily affects brass/bronze)
  - Eliminated provision that required certain products to comply with “voluntary” standards for lead leaching
  - Establishes statutory requirement for calculating lead content
  - Effective 36 months from signature – January 4, 2014



# New Lead Free Exemptions

- Exemptions to the prohibition on use and introduction into commerce provisions in 1417(a)(1) and (3)
  - 1417(a)(4)(A)
    - One exemption is for “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;**”
  - 1417(a)(4)(B)
    - Another exemption is for “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.
- Any item covered by either of the two exemptions can have any amount of lead.



# Key Revisions – Definition of Lead Free

- 1417(d) Definition of lead free
  - Revises the lead content requirement from not more than 8% to not more than a weighted average of 0.25% lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures [1417(d)(1)(B)]
  - Provides calculation procedure for determining the weighted average lead concentration of a product from the components that make up the product [1417(d)(2)]
  - Eliminates 1417(d)(3) – which requires certain products (plumbing fittings and fixtures) to comply with standards for lead leaching (NSF/ANSI Standard 61 Section 9)



## Key Revisions – Effective Date

- Effective Date of January 4, 2014
  - Amendments become effective at the same for the use prohibition in 1417(a)(1) and the introduction into commerce prohibition in 1417(a)(3)
  - A product introduced into commerce legally on January 3, 2014, can't be used in the installation or repair of a PWS or residential or non-residential facility providing water for human consumption on January 4, 2014
  - Potential purchasers that could be affected by the lack of a staggered effective date include: plumbers, plumbing product retailers, developers, schools, and water systems
  - Back inventory that does not meet 0.25% lead free calculation cannot be installed after January 3, 2014 unless it is exempt from the prohibitions



# Issue #1: Demonstrating that Products are Lead Free

- Should manufacturers/importers be required to demonstrate that a product is “lead free” and if so, how?
- Potential Approaches to Demonstrate Lead Free
  - Require manufacturers to have products certified by a qualified independent third party
    - EPA assisted in the development of NSF/ANSI Standard 372 which uses the same calculation as required under new SDWA lead free definition
  - Manufacturer certification with publicly available documentation of their calculations/tests



## Issue #2: Scope of the Exemptions

- 1417(a)(4)(A) Exemption
  - This exemption from the lead free requirements is for products that “are used exclusively for non-potable services”. To qualify for the exemption, must the product be physically incapable of use in potable services or could it be physically capable of use in potable services, but labeled as illegal for use in potable services?
- Potential Approaches
  - Allow dual product lines (potable and non-potable products that are interchangeable) if the non-potable version of the product is labeled as not for potable purposes
  - All products that are interchangeable with a potable counterpart must meet the new lead content limit because it is not “used exclusively for non-potable services”.



## Issue #2a: Identifying Non-Potable Products if Dual Product Lines Allowed

- If dual product lines are allowed, what kind of label should be used?
- Potential Labeling Approaches
  - Require labeling of package
    - Similar to SDWA 1417(a)(3)(C) which contains a labeling requirement for lead solders used for non-potable applications. Label must state it is illegal to use the solder for installation or repair of any plumbing providing water for human consumption
  - Require labeling of product
    - Products can get separated from the packaging, so there is the potential for purchasers to be unaware of the use restriction
    - Product labeling would likely require some sort of symbol due to size restrictions
  - Require labeling of package and product



## Issue #3: Identifying “Lead Free” Products

- How can consumers know if a product meets the revised “lead free” definition?
  - Labeling could help distinguish between back inventory that does not meet 0.25% lead content requirement and products that do meet the 0.25% lead content requirement
- Potential Approaches
  - Require independent third-party certification against NSF/ANSI Standard 372, which includes certifier’s mark
  - Require manufacturers to label products that meet 0.25% lead content if not done via third-party certification
  - Do not require labeling of lead content
    - Rely on labeling of non-potable products or prohibit interchangeable non-potable products



# Issue #4: Calculation of Lead Content

- Under the new law
  - Lead content must be calculated "for each wetted component" and "the lead content of the material used to produce wetted components shall be used to determine compliance with" the 0.25% requirement.
- What constitutes the "lead content of the material used to produce wetted components"?
- Potential Approaches
  - Lead content at the surface of the product is used
  - Lead content of the alloy used to produce the wetted component is used and not just the lead at the surface layer
    - Acid-washing can remove surface lead, but higher lead layers can be exposed due to erosion/dezincification
    - Coatings may also wear off over time and expose the brass/bronze
    - Approach is consistent with the calculation for California and NSF/ANSI Standard 372



## Issue #5: Repairing and Returning Products to Service

- Section 1417(a)(1)(A)
  - Prohibits the use of items that are not lead free “in the installation or repair” of any PWS or any plumbing in a residential or non-residential facility providing water for human consumption
  - Can a product in the system (or the facility) be repaired using lead free component parts and returned to service even if other component parts that were not repaired are not lead free?
- Potential Approaches
  - Entire unit would need to meet 0.25% lead content
  - Only components being replaced would need to meet the 0.25% lead content
- Approaches assume that all component parts being sold separately meet the 0.25% lead content



## Next Steps

- Evaluate information received from the stakeholders
- Revise 40 CFR 141.43 section on lead free as part of the Lead and Copper Rule Long-Term Revisions
- Regulatory revisions are not likely to be promulgated prior to January 2014 effective date
- What, if any, interim guidance is needed?

A large, faint watermark of the Environmental Protection Agency (EPA) logo is centered in the background. The logo consists of a circular border containing the text "UNITED STATES" at the top and "ENVIRONMENTAL PROTECTION AGENCY" at the bottom. In the center of the circle is a stylized flower with three leaves and a white flower head.

# Discussion

Reduction of Lead in Drinking Water Act  
Public Meeting



Please send written comments to:

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By August 31, 2012