Are You Ready For 'Lead Free' 2014?

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The clock is ticking, counting down to the new "lead free" mandate, effective Jan. 4, 2014, which will be considerably stricter than the current federal requirement. Under the *Reduction of Lead in Drinking Water Act*, signed Jan. 4, 2011, "lead free" will be redefined as "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."

What "Lead Free" Really Means

Although "lead free" still doesn't mean completely free of lead, 0.25% (0.2% with respect to solder and flux) is a far cry from the current definition of 8.0%. Semantics aside, the repercussions of the altered definition are significant. Come next year, it will be illegal to sell or install products that do not adhere to the new requirement.

Wetted parts include meters, expansion tanks, backflow preventers, flexible connectors, strainers, and assorted gauges, fittings, valves, etc. — any product used to convey water anticipated for human consumption. Wetted components for nonpotable services such as manufacturing, industrial processing, outdoor watering, or toilets are therefore exempt. But in the case of the former, there is much work to be done.

The good news is that the rule does not require existing infrastructure to be replaced. However, if a noncompliant component is taken out of service for any reason, such as repair or testing, it *may* need to be replaced. According to the EPA's "Frequently Asked Questions" on the topic, "Any part used in the repair of the meter that is a pipe, pipe fitting, plumbing fitting, or fixture must meet the new definition of lead free, but the meter being repaired is not independently subject to the [*Reduction of Lead in Drinking Water Act*] requirements...because it is not being used or installed for the first time in that location."

Certifying Compliance

As the developer of the highly recognized and long-standing NSF/ANSI Standard 61 certification that heretofore verified "lead free," NSF International, along with the American National Standards Institute (ANSI), has responded to the updated definition with updates of its own. The result is NSF/ANSI 372, which will go into effect in October 2013 as certification for the 2014 lead-content requirements, designated here:

Some states, namely California, Vermont, and Maryland, are ahead of the curve on compliance; in fact, it was the EPA that followed their lead. California and Vermont adopted the 0.25% standard in 2010, as did Maryland in 2012. Louisiana jumped on board with legislation that takes effect Jan. 1, 2013, beating the EPA to the punch by a year. In response, NSF/ANSI 61, Annex G was developed to verify compliance in these states.

Both NSF/ANSI 372 and NSF/ANSI 61-G are acceptable certifications for the new rule, though the latter is more expensive to procure (a cost passed on to utilities) because it evaluates lead leaching as well as content.

Enforcement

Though implemented by the U.S. Environmental Protection Agency (EPA) as an amendment to the Safe Drinking Water Act (SDWA), the "lead free" mandate will be enforced by individual U.S. states and territories — or more likely the cities, towns, and municipalities within those states, with health and plumbing codes used to drive enforcement.

If misery loves company, U.S. utilities can take heart that their neighbors to the north will also be under the gun. According to NSF, Canada is including the same wording as the U.S. legislation in its standards and codes, with the same effective date.

How To Prepare For 2014

As we approach the January deadline, here's a recommended "to-do" list:

- *Avoid getting stuck with useless inventory.* Have a plan in place to reduce stock of noncompliant products.
- *Ensure your products are reliable.* The move away from standard alloys represents a paradigm shift in manufacturing — one that can yield results equal to or better than traditional brass or bronze, but suppliers must nonetheless prove their products' dependability.
- *Protect yourself.* Noncompliance can be expensive; be diligent in safeguarding against it.
- *Learn how to identify the new "lead free."* Products may say "lead free," but bear in mind that the definition is a moving target that renders prior definitions and certifying marks obsolete.

One thing to be wary of is the sliding-scale definition of "lead free." If it was changed once, it can change again. The hypothetical municipality that invested heavily in "low lead" meters with a 5.0% weighted average of lead would likely have a major case of buyer's remorse today. Because meters have traditionally incorporated (lead-leaching) bronze components, these products draw specific scrutiny with the tightening limits on lead. For municipalities that remain concerned about lead content in their water, or the uncertain nature of future regulations, "zero lead" provides an alternative.

"Utilities have a range of 'lead free' or zero-lead products to choose from," Bridget Berardinelli, a product manager for the utility infrastructure company Sensus, told me. "It's critical that they consider all of the options when selecting new meters."

Berardinelli noted that composite meters, blending plastic and fiberglass, are becoming a popular choice due to their proven strength (see video demonstration) and steadier price, since they aren't subject to fluctuations in the cost of metal. Furthermore, as the name implies (which shouldn't be taken for granted), composite meters actually contain zero lead, as opposed to "low lead" or even "no lead" bronze meters. In the bordering-on-ridiculous series of lead-content classifications, "low lead" can mean anything less than 8.0%, while "no lead," though used within the industry, is not defined by any standard.

There are, of course, a number of quality products and suppliers in the market that can get you compliant. So long as you do your research and put a proper plan in place, you can enter 2014 without fear or dread — "dread free," if you will. (Or is it "no dread," or "zero dread"...?).

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