



Badger Meter

**Upcoming Standards &
Compliance Regarding
Lead-Free Requirements**



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Summary

Badger Meter has and will continue to manufacture and provide products that meet the requirements of current and future lead-free standards. This white paper discusses these changing industry needs both as they relate to Badger Meter products and to water utilities in general.

Background

Over the past several years, regulatory and legislative efforts to reduce the lead contained in all plumbing related products used to deliver drinking water to end users has increased at the state and now federal levels. As a leader in water meter manufacturing, Badger Meter continues to be proactive in this movement.

Lead-related standards began with NSF/ANSI Standard 61. This standard establishes limits for the amount of lead and other contaminants that may leach into drinking water from contact with the wetted surfaces of a meter.

Subsequently, several states have or are in the process of implementing laws which address the allowable lead content in plumbing-related products, specifically California and Vermont. Both these states have passed laws, effective Jan. 1, 2010, requiring wetted surface areas of plumbing fixtures, valves, fittings and pipes to contain no more than an area weighted average of 0.25 percent lead. This is a significant reduction from the previous requirement of 8 percent or less. California and Vermont are driving the lead-free plumbing movement while other states, such as Maryland, are adopting similar legislation. Ultimately, upcoming federal legislation will be enforcing stricter lead-free requirements nationwide.

Solution

While there are a variety of lead-related standards, regulations and laws, Badger Meter has a full line of products that meet these requirements. In fact, NSF audits of our products show that Badger Meter already is in compliance with tighter NSF/ANSI Standard 61 conditions scheduled to go into effect in both 2012 and 2014. Badger Meter has received a compliance letter from NSF stating that these products meet the tighter criteria of this standard. To obtain a copy of the NSF compliance letter to Badger Meter, please visit www.badgermeter.com/lead-free.

To help clarify the different requirements, the potential impact, and how Badger Meter products meet these requirements, each item will be discussed separately.

Jan. 1, 2010 California AB 1953, Vermont S.152 and NSF/ANSI Standard 61, Annex G

The state of California enacted legislation (AB 1953) into law which revised the term “lead-free” as it relates to any pipe, pipe or plumbing fitting, or fixture intended to convey or dispense water for drinking or cooking purposes. For metering products, “lead-free” means not more than an area weighted average lead content of 0.25 percent. Similar legislation in Vermont, S.152, also stipulates that all plumbing products shall comply with a 0.25 percent lead requirement.

Both laws went into effect on Jan. 1, 2010, and state that no person will be able to use, install, or bring into commerce any products listed above unless they comply with the new lead-free law.

In addition, California’s law requires third-party certification. NSF/ANSI Standard 61, Annex G was developed by NSF to establish a lead content evaluation procedure for use when products need to be certified to meet 0.25 percent weighted average lead content maximums.

Badger Meter BiAlloy, engineered polymer, M-Series® and E-Series® meters, and BiAlloy and steel strainers are all certified to NSF/ANSI Standard 61, Annex G.

Jan. 1, 2012 Maryland HB 372

Similar to the laws currently in effect in California and Vermont, the state of Maryland has enacted legislation, HB 372, into law. Like the California and Vermont laws, the pending Maryland law also reduces the amount of lead allowed in plumbing-related products that provide water for human consumption to 0.25 percent weighted average lead content.

While California’s law requires third-party certification, such as NSF/ANSI Standard 61, Annex G, Maryland’s law does not.

HB 372 is scheduled to take effect Jan. 1, 2012. The same meters from Badger Meter that meet the California and Vermont laws already meet Maryland's law.

NSF/ANSI Standard 61, Annex G and NSF/ANSI Standard 372

In addition to these recent state and federal developments, there are current and pending revisions to NSF/ANSI Standard 61.

NSF/ANSI Standard 61 typically manifests itself as a state or local voluntary standard which establishes limits on water utilities for the amount of lead that may leach into drinking water from the water contact materials within water products. Testing under NSF/ANSI Standard 61 is intended to limit leaching of contaminants, including lead, from products into water at levels exceeding applicable drinking water criteria. The current acceptable level for lead is 15 ppb for small meters and 1.5 ppb for meters in sizes 4 inches and above.

NSF/ANSI Standard 61 was revised in Dec. 2008 to necessitate a 0.25 percent lead content limit in addition to current chemical extraction (i.e., leachate) requirements. These refinements were placed in Annex G. To be certified to NSF/ANSI Standard 61, Annex G, product must first be certified to NSF/ANSI Standard 61.

There is a new standard for product certification to lead-free content standards without the leachate certification, NSF/ANSI Standard 372 (Drinking Water System Components, Lead Content). NSF/ANSI Standard 372 is a stand-alone certification for the lead-free content criteria of Annex G, but it does not require prior NSF/ANSI Standard 61 certification.

NSF/ANSI Standard 372 will replace the lead content conditions of Annex G by Jan. 4, 2014.

July 1, 2012 Revisions to NSF/ANSI Standard 61 (Currently Referred to as Annex F)

Effective July 1, 2012, the chemical extraction requirements of NSF/ANSI Standard 61 will be tightened to meet lead extraction limits of 5 ppb instead of the current 15 ppb for small meters and 0.5 ppb instead of 1.5 ppb for meters 4 inches and larger. The tightened requirements are detailed within Annex F and will be included as the new lead leachate requirement of NSF/ANSI Standard 61. Annex F will be obsoleted when these new lead leachate limits are incorporated into the NSF/ANSI Standard 61 body on July 1, 2012.

Badger Meter bronze B81 meters 4 inch and above that meet the current NSF/ANSI Standard 61 will not comply with the revised standards. Thus, the July 1, 2012 deadline will mark the end of their NSF/ANSI Standard 61 listing.

Testing indicates that Badger Meter BiAlloy, engineered polymer, M-Series and E-Series meters already comply with this tighter standard. While actual NSF recertification cannot occur until after the standard goes into effect, NSF has issued a letter to Badger Meter stating that our BiAlloy, engineered polymer, M-Series and E-Series meters, and BiAlloy and steel strainers meet the future standards. To obtain a copy of the NSF compliance letter issued to Badger Meter, please visit www.badgermeter.com/lead-free.

Jan. 4, 2014 Amendment to the Federal Safe Drinking Water Act – Public Law No. 111-380

The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of America's drinking (potable) water and is administered by the EPA.

On Jan. 4, 2011, President Obama signed legislation (S.3874, the Reduction of Lead in Drinking Water Act) into federal law. This legislation amends the SDWA and reduces the maximum allowable percentage of lead that comes in contact with potable water. Similar to the California, Vermont and Maryland laws, this pending federal law will reduce the percentage of lead from its current limit of 8 percent to 0.25 percent. This is a federal requirement for all potable

water applications. This new law does not require third-party compliance certification.

This law will affect all states, and compels all water meter suppliers to provide complying meters and prohibits water utilities from using non-complying meters. Badger Meter BiAlloy, engineered polymer and stainless steel meters already meet these requirements. To assist water utilities with compliance with the new law, Badger Meter will cease offering B81 bronze meters, brass companion flanges or brass connection sets effective July 1, 2013.

Conclusion

As a benefit to our customers, Badger Meter manufactures a full line of lead-free meters made from bronze alloys, engineered polymer or stainless steel material. By offering the broadest choice in housing material, utilities have the flexibility to choose the best meter for their specific application.

Our BiAlloy bronze, engineered polymer, M-Series and E-Series meters currently meet the requirements of and are certified to NSF/ANSI Standard 61, Annex G. In addition, Badger Meter lead-free meters already comply with the new federal lead limitations, effective Jan. 4, 2014.

Chart of Requirements

REQUIREMENT	EFFECTIVE DATE	EXPLANATION	LIMITS	CERTIFICATION REQUIRED	BADGER METER COMPLIANCE
NSF/ANSI Standard 61	Est. 1988, current version 2010A	Lead leaching/ extraction	15 ppb for meters 3" and smaller 1.5 ppb for meters 4" and larger	Yes (if state or local requirement)	<ul style="list-style-type: none"> Engineered polymer meters 5/8-3" BiAlloy meters 4" and above in B81 or BiAlloy metal M-Series and E-Series meters See NSF listing for a complete list of certified products
AB 1953 California	Jan. 1, 2010	Lead content	Weighted average of not more than 0.25%	Yes (Annex G was written in response to AB 1953 thus products are certified to Annex G compliance)	<ul style="list-style-type: none"> Engineered polymer meters BiAlloy meters BiAlloy and steel strainers M-Series and E-Series meters See NSF listing for a complete list of certified products
NSF/ANSI Standard 61, Annex G	Available prior to Jan. 1, 2010	Lead content	Weighted average of not more than 0.25%	Written in response to AB 1953	<ul style="list-style-type: none"> Engineered polymer meters BiAlloy meters BiAlloy and steel strainers M-Series and E-Series meters See NSF listing for a complete list of certified products
S.152 Vermont	Jan. 1, 2010	Lead content	Weighted average of not more than 0.25%	No (products certified to Annex G compliance)	<ul style="list-style-type: none"> Engineered polymer meters BiAlloy meters BiAlloy and steel strainers M-Series and E-Series meters
NSF 372	Released Oct. 2010	Lead content	Weighted average of not more than 0.25%	Yes (if state or local requirement products must be certified to Annex G compliance)	<ul style="list-style-type: none"> Engineered polymer meters BiAlloy meters BiAlloy and steel strainers M-Series and E-Series meters
HB 372 Maryland	Jan. 1, 2012	Lead content	Weighted average of not more than 0.25%	Not currently (products certified to Annex G compliance)	<ul style="list-style-type: none"> Engineered polymer meters BiAlloy meters BiAlloy and steel strainers M-Series and E-Series meters See NSF listing for a complete list of certified products
Revised NSF/ANSI Standard 61 (currently Annex F)	July 1, 2012	Reduces lead leaching limits by a factor of 3	5 ppb for meters 3" and smaller 0.5 ppb for meters 4" and larger	Yes (if state or local requirement)	<ul style="list-style-type: none"> Engineered polymer meters BiAlloy meters BiAlloy and steel strainers M-Series and E-Series meters Currently comply and will be certified July 1, 2012
HB 471 Louisiana	Jan. 1, 2013	Lead content	Weighted average of not more than 0.25%	Yes	<ul style="list-style-type: none"> Engineered polymer meters BiAlloy meters BiAlloy and steel strainers M-Series and E-Series meters See NSF listing for a complete list of certified products
Federal Law No. 111-380	Jan. 1, 2014	Lead content national law	Weighted average of not more than 0.25%	No	<ul style="list-style-type: none"> Engineered polymer meters BiAlloy meters BiAlloy and steel strainers M-Series and E-Series meters Eliminates B81 as product offering



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