



# Lead-Free Goes National

**W**orldwide, engineered plastic connectors and tubing are used in the water quality industry for a host of residential, commercial and industrial applications. From water treatment and filtration to beverage dispensing and ice making, there are several sound reasons for their widespread use.

By Maribel Pagan

Plastics are less expensive than metals and are not subject to commodity price rises. They are lighter and more flexible than metals, which makes them easier to handle in confined spaces. They are largely composed of low-lead or no-lead plastic materials, which adds security to water quality. With the emergence of lead-free legislation, water quality is becoming a matter of law in the U.S.

Low-lead plastic products are ready for federal lead legislation

## Nationwide Regulations

On Jan. 4, President Obama signed into law S.3874: a bipartisan-supported bill that establishes a new federal standard modeled after the California lead law, which went into effect on Jan. 1, to reduce the lead content in new plumbing materials in order to limit exposure to toxic lead in drinking water.

The legislation, known as the Reduction of Lead in Drinking Water Act, was sponsored by California legislators in both the House and Senate and was supported by Plumbing Manufacturers Intl. and the Plumbing-Heating-Cooling Contractors National Assn. It mandates that all states limit lead content in solder and flux to 0.2% and that wetted surfaces of pipe, fixtures and fittings contain no more than a weighted average of 0.25% of lead. It reduces the amount of allowable lead content in faucets and plumbing fittings from the 8% currently allowed by the Safe Drinking Water Act down to 0.25% in an effort to limit the amount of lead that can leach from plumbing into drinking water.

Reducing lead in water distribution systems and components will

help keep lead out of the water stream and improve water quality. Reducing lead content to 0.25% is in keeping with health experts' evidence that lead exposure, even in small amounts, can pose serious medical risks to children and adults, including kidney disease, mental development, hypertension, hearing loss and even brain damage. It is estimated that lead exposure costs \$43 billion annually in lost job time, health expenses and other impacts.

Recent polls indicate that Americans will welcome the law. A survey released at WQA Aquatech USA 2011 showed that almost half of those polled expressed concern or high concern over the quality of their household drinking water, and that many of them owned home filtration devices. A majority was willing to pay more to ensure elimination of contaminants from their water.

## Compliance Concerns

States have 36 months to implement the law, meaning that all plumbing manufacturers will have to supply materials with greatly reduced lead content by January 2014. One benefit of the new law is that there will be product uniformity among manufacturers since all will be held to the new standard. Currently, because California, Vermont and Maryland have lead-free laws already, manufacturers are faced with producing standard and lead-free products—two different SKUs for each product.

The law could prove to be a boon for manufacturers whose products currently do not use much or any lead and will not need to go through an expensive conversion

process. Engineered plastic products are commonly made of polypropylene, nitrile, acetal copolymer and low-density polyethylene, so lead removal will not be an issue. For this reason, manufacturers of engineered plastic products for water treatment and plumbing applications will likely benefit from the new law. Not surprisingly, many manufacturers and suppliers of PEX and plastic fittings, valves and tubing view it as a welcome development.

## Fittings for the Future

The future of plastic fittings is limited only by the development of new resins and the ability of advanced molding machines to process them. Reliance on metal has given way to a broad acceptance and use of plastic push-in fittings, which are simple to use, reliable over the operational life of a fluid handling system and leak-proof when installed correctly according to manufacturer instructions.

Water quality distributors and installers, in advance of the new legislation, will move to take advantage of low-lead or lead-free product alternatives that provide their customers peace of mind when it comes to ensuring the highest water quality possible. *wqp*

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