



Let's Get the Lead Out

By Marc Peo

"The talk you hear about adapting to change is not only foolish, it's dangerous. The only way you can manage change is to create it. By the time you catch up to the change, the competition is far ahead of you."
— Peter Drucker

His statement clearly is a solid axiom for business management. But when I came across this quote on a recent overseas flight, it struck me that Drucker could just as easily have been talking about the lead-free issue in our industry, particularly in the United States. We have been spending a significant amount of time and money trying to show why lead-free alternatives won't work or are harmful to the environment, instead of using our resources to further the implementation of lead-free processing and pursuing environmentally sound solutions.

Recently, I have read articles by our colleagues saying that "banning lead is not based on good science" and "it has never been proven that electronics assemblies contribute to landfill toxicity." There is no question that both leaded

and lead-free products have environmental impacts. However, I agree with Jennie Hwang, Ph.D., when, in a previous conversation, she said, "Using the equipment and processes that have the least impact is always the best science ... to wait until there is enough toxicity evidence is too late. Good prevention is always the right approach."

Not only are we not *initiating* this change, we are barely trying to adapt to it. We must embrace the lead-free process and move as quickly as we can to implement it in a businesslike and environmentally responsible manner. Not to do so is, as Drucker says, both foolish and dangerous.

In light of the current slowdown in the economic cycle, it is especially important to focus on lead-free implementation. Those companies that make positive moves now to employ lead-free technologies are likely to emerge from this trough earlier, with their business levels accelerating faster than those who have not.

We must push to begin using lead-free pastes, spur vendors to increase the availability of lead-free components and begin adapting the assembly process. Recycling programs for both leaded and lead-free assemblies must be addressed simultaneously with, but not to the exclusion of, lead-free implementation.

Through a combination of legislative moves and voluntary actions by Japanese manufacturers, several products currently are being offered with a "green leaf" sticker, signifying lead-free manufacture. The price for many of these items is the same as — or even less than — an equivalent product without the green leaf. In the case of Panasonic, the result

was an 11 percent increase in market share for Mini Disc players bearing that environmentally friendly label. In other words, the lead-free movement is as much about marketing as it is about the environment.

Our motivation may be strictly to generate more business ("lead-free sells more product, so we should do it"), to be a good global citizen ("any effort that removes even a portion of lead from the waste stream is worth pursuing") or to find a balance between the two. No matter what the motivation, it is high time we stopped paying lip service to lead-free assembly and embraced it.



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Yes, this process is challenging. Yes, change is uncomfortable. Yes, we may all face a learning curve. But there are numerous resources available to help navigate the transition successfully. Among all the published articles discussing lead-free processing, there are many technical studies exploring the characteristics of the various lead-free alloys and the process revisions required to implement them. It is time to do some homework.

The IPC (www.leadfree.org), NEMI (www.nemi.org) and ITRI (www.lead-free.org) Web sites are all terrific resources. Additionally, the interactive message board at SMTNET.com is a great place to ask process questions of industry experts. For recycling, the Electronics Recycling Initiative (ERI) offers continuing updates on activities at both state and county levels (www.NRC-recycle.org/Programs/electronics/policy.htm).

Another valuable resource includes suppliers of capital equipment, assembly materials and related software. These vendors know the impact of lead-free assembly, and in most cases, already have adapted their existing products or developed new systems to optimize lead-free assembly. So call your vendors — this information is readily available and free. Talk to the vendors' customer references. From them, you likely will find ways to greatly accelerate implementation.

As you pursue this process, you may be faced with some difficult decisions. But having to choose between competing lead-free technologies will identify your company as a forward thinking one that is initiating change. Your company will benefit, your customers will benefit and the environment will benefit. Considering the alternatives, can we afford not to do it? It's time to get the lead out!

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