

Fern Abrams

What's in *Your* Electronics Equipment?

Can a materials declaration standard be developed by the RoHS deadline?

Under the guise of wanting to offer customers so-called “green” or environmentally friendly product, the past few years have seen an increasing focus on the material content of electronics equipment. While the European Union’s Restriction on Hazardous Substances (RoHS) Directive is the most visible manifestation of this movement, the growing list of “materials of concern” goes beyond the six substances prohibited under RoHS.

In preparation for compliance with these and other materials restrictions, OEMs are discovering that the outsourcing mania of the '90s has left them with only a limited understanding of what is in their products.

To close the gap between what they know and what they need to know, OEMs are peppering first-tier suppliers with questionnaires to determine the material composition of products and components being procured. The first-tier suppliers, often large EMS firms, in turn question their suppliers, and so on down the chain.

This all seems fine, unless you are a supplier with several OEM customers, each with their own questionnaire. The questionnaires come in different formats, ranging from a letter or Excel spreadsheet to complex software programs that take days to master. Adding to the problem, some OEMs want to know only about the six RoHS substances, others have a longer materials-of-concern list and still others want 100% accounting of everything in the product.

A standard, the Joint Industry Guide (JIG), was developed by the Electronics Industries Alliance, IPC, the European Information and Communication Technology Association, and the Japan Green Procurement Survey Standardization Initiative. The proposed standard contains a list of materials and substances for disclosure, the regulatory requirements that establish threshold levels and a recommended set of data fields for information exchange.

While the JIG has received a high level of support, a number of dissenting voices arose. The main controversy, which has yet to be fully resolved, concerns the list of materials to be reported. Some companies favor a min-

imalist approach of reporting only restricted or regulated materials, while others claim the need for a much longer list of materials, such as precious metals and plastics, for recycling purposes.

Concurrently, IPC has written a handbook on materials declaration (IPC-1065). The handbook builds on the JIG and is intended to help companies develop a standardized way of obtaining information and completing materials declarations. The handbook seemed fairly non-controversial, but encountered a few bumps on the road as members yet to be besieged by materials declaration requests questioned its need. The handbook, currently in production, is scheduled for release by end of this month.

In tandem with this work, other stakeholders became concerned with the electronic interchange and management of materials declaration data. Consider the position of an EMS firm, which buys thousands of different components for a single product assembly, and the complexity of the task becomes apparent. Some larger EMS firms support development of an all-encompassing database, similar to the behemoth developed by the automotive industry for compliance with the End-of-Life Vehicle Directive, while others favor a simpler RoHS-oriented yes/no checklist approach.

NEMI and IPC are currently wrestling with the development of a layered material declaration format to support multiple levels of detail, along with a standard for electronic interchange, regardless of the software used for data management.

The goal of standards is to make the business process efficient, thereby saving money. Despite this, the systems already in use are moving forward in divergent directions. The complex systems required by some OEMs and EMS firms are imposing large costs on the supply chain with the expectation that costs will be absorbed and not passed on to the OEM customers. With no price placed on information requests, OEMs and EMS firms are free to ask for an unlimited quantity of information, with no end in sight. Where materials declaration will end up is anyone’s guess right now, but wherever it’s going, there’s not much time left to get there. ■

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