Building an Effective Data Acquisition Strategy: Acquiring Product Material and Compliance Data

Managing the environmental performance of products is an increasingly complicated challenge for manufacturers who face a myriad of requirements from regulators, consumers and customers to control and report on the toxicity, recyclability and overall environmental impact of their products. Not only have governments, business partners and consumers demonstrated a clear preference for “greener” brands, but investors are now pressuring manufacturers as well. For example, the Dow Jones Sustainability Index identifies and tracks leading sustainability-driven companies around the world.

While managing product environmental performance is critical for corporate strategy and product stewardship, it is also vital to ensure products can be legally sold in target markets. Non-compliance with regulatory mandates such as Conflict Minerals, REACH, RoHS, ELV, RRR, WEEE, Battery and Packaging Directives can result in blocked shipments, recalls, fines and penalties.

In order to manage product environmental performance, detailed component and material information is required. While the task of collecting the necessary information may seem daunting, especially when considering the number of parts and materials suppliers provide, there is no need to feel overwhelmed. Manufacturers are implementing programs that require reporting on the material and substance content within their products. These top level programs are increasing the availability of information up and down the supply chain by driving standards, creating awareness and training suppliers to provide the required information. By leveraging these efforts and following the steps below you can build an effective data acquisition strategy.

– Establish a management repository that can serve as a single source of truth. Use this repository in conjunction with your product development and manufacturing
processes and systems to capture, update and re-use product substance, material and compliance data from your approved manufactures and across your product portfolio.

- **Identify your data source options based upon your product architecture.** For buy parts, determine the standards, systems and potential services that can support a comprehensive data acquisition strategy. For example, in the auto industry, you’d likely want to align with the international material data system (IMDS) as the key source and the global automotive declarable substance list (GADSL) as the definition of the data you’d collect. For other industries such as electronics a more generic standard such as IPC 1752 combined with commercial exchanges like Green Data Exchange (GDX) or BOMcheck can prove to be an effective backbone for data acquisition. For make parts, align internal material libraries with reference sources for material and substance content as well as manufacturing process considerations and import your part material definitions into your single material and substance repository.

- **Define your data collection process to improve data quality over time.** The best approach should acknowledge the concept of progressive disclosure and establish a process for continual improvement with short term emphasis on high risk materials and components. This will maximize the efficiency of your program. There are three common types of data: simple certificates of compliance, information on controlled/ hazardous substances, and full material disclosure. While the best approach is to start with the end in mind – full material disclosure – it is important to leverage whatever type of information is currently available and focus on prioritizing and improving the process over time.

- **Leverage industry standard formats for data collection.** Adopting industry standard data formats will lower the total cost of collecting data. Standards such as IPC1752, IEC 62474, JAMP enable suppliers to define the data once and make it available to multiple manufacturers without requiring excess work. When companies employ software systems that support standards the collection and reporting process can also be highly automated. Additionally, free tools such as [www.1752builder.com](http://www.1752builder.com) aid suppliers in the production of standards based information.
–**Train suppliers and define a data governance policy.**  Supplier training is critical to reduce confusion, increase response rate, and improve data quality. It also important to set and communicate a data governance policy defining risks to the suppliers, contractual obligations, and financial impacts linked to compliance.

–**Use software to automate the data collection process and create an audit trail for regulators.** An effective system will automate the data request, collection and validation process, enabling companies to increase the rate of data acquisition while improving data quality. Software systems can also automate compliance assessments and reduce the risk of non-compliant products through early risk identification during the product development process. Finally, software systems provide an ideal mechanism to demonstrate compliance and automatically generate the certificates of compliance required by regulators.

To respond to the growing number environmental and other compliance requirements, manufacturers no longer need to throw more resources at the problem. By applying these tactics, manufacturers can increase the effectiveness of their compliance data acquisition program.

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