

Williams, John (ECY)

From: Thomas Head [Thomas.Head@wal-mart.com]
Sent: Monday, June 14, 2010 3:11 PM
To: Williams, John (ECY)
Cc: Jennifer Sommer; Peggy Fowler
Subject: Reporting chemical composition by material
Attachments: Thomas Head.vcf

John,

Walmart supports the concept that chemicals of concern must be tied to the material in which they occur because complete and accurate information can only be efficiently captured from the suppliers of raw materials or components at the time of procurement. This information can be passed through the supply chain and aggregated by each member of the value chain to include all relevant information for a particular end product.

Walmart is examining ways to address the chemical data gap within the supply chain for consumer products as part of the Company's initiative to create a worldwide sustainable product index. The supply chain currently faces a major obstacle in getting chemical information from the chemical/raw materials manufacturer to the retailers because manufacturers and retailers lack full visibility to the chemical and material composition of most consumer products (aside from most formulated products like liquids, paste, putties, gels, and powders). This deficiency is caused by three significant factors: (1) the lack of uniform data sets for chemical information; (2) the lack of a comprehensive data repository to store chemical and material information; and (3) the fact that data on chemicals and materials becomes more complex as the product becomes more complex.

Typically, the only entities that know what chemicals are present in a product or substrate are the entities applying or incorporating the chemical on or into a material used in the component. Except for formulated products, fabricated product manufacturers source component parts from various component manufacturers and frequently do not know what chemicals or materials are contained within those components, and such manufacturers would have to obtain this information from the raw materials manufacturers. For example, a children's upholstered chair manufacturer will source textiles from one or more sources (in which various dyes could be used), foam or filling from other sources (in which flame retardants could be used), and wood or metal frame components from another set of suppliers (which could contain formaldehyde in the wood components or various metal alloys in the metal components). In most situations, the end product manufacturer will not know what chemicals are used, in what concentrations those chemicals would be found in the substrates or components, or why those chemicals are used in the component or substrate. This simplistic situation illustrates why manufacturers must collect chemical composition data upstream in the materials procurement process as part of the component specifications.

Manufacturers and retailers, including Walmart, are collectively developing solutions to the above-mentioned three primary issues through a nonprofit global standards organization, GS1. Over the past several years, GS1 and its manufacturer/retailer partners have created the framework for a data collection solution, the Global Data Synchronization Network (GDSN), to pass information about consumer products through the supply chain from raw materials to final assembly. This matrix database (or cloud network) is designed to provide supply chain members with the latest product information in their systems, and as these changes are made, all companies who are associated with the product are notified of these changes. In the near future, this

network of databases could allow chemical manufacturers to upload chemical characteristics and safety information into a database, which then could be accessed by raw materials manufacturers, who could upload additional information regarding the chemicals and/or materials combined to create a specific component. Finished product manufacturers or assemblers could then access the information from the chemical manufacturer and the raw materials manufacturers and add additional information regarding the final product (such as specific components that were assembled to create the end consumer product), which then could be accessed by retailers to inform purchasing practices and ensure compliance with existing requirements. An overly simplified example of where such a matrix database could be helpful would be the manufacture of a child's shoe, which could contain up to 250 components (including the sole, upper material, lining and interlining materials, toe and heel caps, throat, pad cushion, bottom filler, adhesives, etc.), all of which could be comprised of up to 50 different materials (such as leather, textile blends, plastic, cork, rubber, glue, paint, electroplating, etc.). The chemical manufacturer who makes the plasticizer that is used in the sole of the shoe could upload information about its product, which could be accessed and used by the sole manufacturer, and then the shoe manufacturer could gather and use information regarding all of the different chemicals and components used in the manufacture of the final product. All of this information could be accessed by all of the retailers who sell that shoe to inform them of the chemicals used in the product to ensure compliance with existing chemical regulations, etc. In addition, regulatory agencies could readily access this information to collect chemical-specific information in particular products or perform audit functions on products sold in their states without having to solicit such information from the manufacturers or retailers.

To organize this data in an efficient and readily-accessible manner, GS1 has developed a Global Product Classification (GPC) schema that includes definitions for each individual product type, as well as attributes that can be assigned to each product. Continuing with the shoe example, manufacturers and retailers around the world who manufacture or sell shoes could use a standard definition for specific types of footwear and, at some time in the near future, indicate the specific materials from which the product is constructed. Walmart believes that using this classification schema and component description would be more efficient and ultimately more accurate if chemicals are measured at a material level in the components that comprise the finished goods. The concentration values should be captured independently and associated with the material so that the reporting results are not distorted in the percentage of the final total weight of the product. For example, outdoor playground equipment can be composed of multiple substrates, such as metal, plastic, and wood. If the reporting chemical is a plasticizer, it does not make much sense to grind the entire product (which most likely is constructed primarily of wood or metal) to test for and report the percentage of the product that contains plasticizers. Walmart advocates that a much more effective and accurate rule would require manufacturers to report the amount of a chemical in a particular substrate or component, based on substrates or components in which the chemical most likely would be found. Using this methodology, only the plastic components of the outdoor playground equipment (like the slide, swing seats, play sets, etc.) would be analyzed for plasticizers, instead of all components, including the wood and metal parts. Associating the materials and specific products (based on the GS1 GPC schema) with the chemicals reporting list also enables periodic refinement of the list based on new assessments. For example, if the Department of Ecology (Ecology) determines that bisphenol A (BPA) in polycarbonate prescription eyewear or sports safety equipment is not likely to be of concern, but BPA in polycarbonate baby feeding products is an area where Ecology needs more information, Ecology could require baby feeding products manufacturers to report the concentration of BPA in baby feeding products, but not impose the same requirement on prescription eyewear or sports safety equipment.

Walmart believes a single collection point for product information across the supply chain is much needed and advocates the GDSN, as developed by GS1, currently affords the best opportunity to capture and share chemical and material information using the attributes available in the GPC schema. Although the standard

requires amendment to make material descriptions consistent across product categories, the existing framework should be used in the reporting scheme to facilitate the exchange of information from raw materials to finished goods.

Thank you for the opportunity to provide feedback on this critical issue,

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