Abstract for CARE 2010

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Title: The Green Screen for Safer Chemicals: A Validation Tool for Safer Chemicals Use in the Electronics Industry
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Abstract:

As the electronics industry has implemented RoHS and other substance restrictions, the high cost of replacing substances in products has led many companies to consider how to reduce the impact of future substance restriction legislation. There is a growing recognition that it is usually more cost effective to select replacement materials that are not likely to face future restrictions than to treat all unrestricted alternatives as equally acceptable, which creates the risk of having to perform multiple substitutions for the same application. An important part of selecting replacement materials that are less likely to be restricted is to perform a comparative hazard assessment that considers the environment and human health impacts of potential alternatives.

The Green Screen for Safer Chemicals, launched in 2007 by Clean Production Action, is the first open source comparative chemical hazard assessment tool to provide a comprehensive data set that assesses the inherent *hazard* of a chemical and scores the chemical into one of four benchmarks ranging from the most hazardous to the most benign chemicals. The value of the Green Screen is that it provides a clear and transparent decision making logic that assesses seventeen globally harmonized data points for environmental fate as well as human health and environmental toxicity. It is a repeatable, scientifically-based systematic method that can be consistently applied to screen materials and provide a score that can be valued with other key considerations like cost and performance as well as other sustainability indicators like recyclability and energy consumption.

HP and other manufacturers have recently begun to pilot the Green Screen as a tool for assessing alternatives to polyvinyl chloride (PVC) and brominated flame retardants (BFRs). It has proven to be an effective and useful tool for identifying safer alternatives that are less likely to face future restrictions, and also for clearly communicating acceptability criteria to suppliers.

Widespread adoption of the Green Screen as an alternatives assessment tool in the electronics sector would enable the creation of "white lists" of preferable solutions to complement the "black lists" of restricted substances. White lists would encourage suppliers to choose materials that have improved environmental and human health characteristics and less potential for future restriction, thereby increasing the collective market uptake of environmentally preferred technologies while minimizing costs expended on replacement materials that do not have improved environmental characteristics.

Clean Production Action, Hewlett Packard, and the University of Massachusetts' Lowell Center for Sustainable Production have established a Green Screen Assessment Program that will provide independent, expert reviews of Green Screen assessments and a repository for sharing completed assessments. This paper will describe the joint Green Screen assessment program and a new pilot on alternative flame retardants.