

CALIFORNIA GREEN CHEMISTRY INITIATIVE WILL IMPACT US CONSUMER PRODUCTS

Green chemistry is an approach intended to bring about a whole new way of thinking about production processes. Such an approach represents a major change – why deal with toxic chemicals at the end of the lifecycle when you can try to reduce or exclude them from the start of the production process? This is the sort of change the California Green Chemistry initiative is trying to bring about.

US GREEN CHEMICALS INITIATIVES

There is no lack of green initiatives in the United States, in fact, there are several states where green chemistry is not only being reported as a requirement but it is also implemented as legislation. In the state of California (CA), the Green Chemistry Initiative is intended to make all consumer products safer. Green chemistry is defined by the California Department of Toxic Substances Control (DTSC) as the “innovation, design and manufacture of chemical products and processes intended to reduce or eliminate the creation and use of materials hazardous to human health and the environment.”

This applies for all products sold in California, including electrical and electronic (E&E) equipment. In fact, there are more than 100,000 toxic chemicals used in production today¹ and most of the electronic gadgets that we use contain these chemicals. The production of a laptop, for example, uses approximately 3200 litres of water and 160 litres of fossil fuels², but the main toxic culprit is the complex chemical process that is used in the production of a silicon microcircuit.

WHAT DOES THE INITIATIVE MEAN FOR MANUFACTURERS?

There is a big difference between managing chemicals at the end of a product's lifecycle and managing chemicals from the start of the product design phase. Green chemistry experts will explore several stages of the product's life: the manufacturing process, the consumption/usage process



and the disposal process, thus trying to eliminate dangerous chemicals from the start or replace them with benign chemicals. The challenge brought by the CA Green Chemistry initiative to manufacturers will be trying to find the right kind of substitutes that are less harmful than their predecessors.

Manufacturers will also need to provide a report to retailers, certifying that their products are free of Chemicals of Concern (CoC). If not, they need to prove that a research program is being undertaken to find safer alternatives for the CoCs used. If the use of the CoCs contained in the products is authorized by the relevant agencies, the manufacturers also need to present a waste management program to avoid any negative effects from the disposal of CoCs in the environment.

The initiative will translate into additional tasks for manufacturers, but if environmental and public health protection are not enough of an incentive to implement green chemistry measures, maybe the 'green' in green

chemistry will be. Green chemistry can amount to significant cost savings in the production and disposal process. By not using large amounts of hazardous chemicals in the production process there will be savings on the disposal and recycling end. In addition, sales will rise due to the increasing popularity of green products among the average consumer base.

SGS can support companies in achieving compliance with the California Green Chemistry initiative and with other green chemistry regulations through testing articles for CoCs, using a risk-based approach.

For more information on the complete range of SGS Restricted Substances Services visit: www.sgs.com/rohs.

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¹ California Green Chemicals Initiative

² Based on calculations by Arizona State University