

## Compound Solutions

By Olivier Theard

The world of chemical regulation is changing dramatically. Recent laws point to a paradigm shift whereby the old model — essentially a “wait and see” approach in which chemical health risks were analyzed after someone complained about an injury allegedly caused by that chemical — is giving way to a new model whereby chemical risks are analyzed in advance of exposure in an effort to minimize future harm. The result will have profound consequences for businesses as regulators compile more “up front” environmental and health risk information about products, potentially resulting in manufacturers shifting the manner in which products are designed. The new laws may also have consequences in products liability litigation, as green chemistry standards may bear on legal causation issues in tort cases.

This September, California further validated its reputation as the country’s de facto laboratory for environmental regulation by passing AB 1879 and SB 509. These so-called “green chemistry” laws establish a new standard of chemical regulation and management. In general, the laws require the Department of Toxic Substances Control to acquire comprehensive information about chemical risks in order to reduce future use and exposure to such chemicals. This “future based” thinking was also the impetus for California’s landmark 2006 passage of AB 32, the Global Warming Solutions Act, which requires California to reduce emissions of greenhouse gases to 1990 levels by 2020. Unlike the old model of environmental regulation, which requires clean up of harm already existing (i.e., the Comprehensive Environmental Response, Compensation and Liability Act), AB 32 and the green chemistry laws require actions now to avoid potentially catastrophic environmental or health impacts in the future.

Specifically, AB 1879 authorizes the Department of Toxic Substances Control to develop regulations by January 2011 for the purpose of identifying and prioritizing “chemicals of concern.” In identifying and prioritizing chemicals of concern, the department must consider the volume of chemical in the state, potential for exposure, and effects on sensitive subpopulations (such as children). As part of adopting regulations, the department must undertake a “multimedia life cycle evaluation” of the chemical, which means that it must consider the “identification and evaluation of a significant adverse impact on public health or the environment, including air, water, or

soil, that may result from the production, use, or disposal of a consumer product or consumer product ingredient.” California Health & Safety Code Section 25252.5(g). Any multimedia lifecycle evaluation will be presented to the California Environmental Policy Council, which may determine that the chemical will cause significant adverse impact on the public health or the environment, or may determine that alternatives exist that would be less adverse. If the council determines that there is a significant adverse impact, the Department of Toxic Substances Control or other state agencies “shall take appropriate action that will, to the extent feasible, mitigate the adverse impact so that, on balance, there is no significant adverse impact on public health or the environment.”

In addition, the department must adopt regulations to establish a process for evaluating chemicals of concern in consumer products for the direct purpose of limiting or reducing exposure to such chemicals. Alternatives to chemicals in consumer products must also be evaluated, with a focus on a plethora of factors, including the products’ useful life, energy efficiency, waste and end-of-useful-life disposal, environmental and economic impacts, and, importantly, “product function or performance.” At the conclusion of its analysis, the Department of Toxic Substances Control is authorized to take any number of actions, from “no action” to imposing labeling requirements, controlling access or even restricting and outright prohibiting certain chemicals in consumer products. California Health & Safety Code Section 25253.

SB 509 is far less detailed than AB 1879, but may end up being just as important because it requires public availability of chemical information. SB 509 creates a Toxics Information Clearinghouse, a Web-based database intended to increase consumer knowledge about the toxicity and hazards of the thousands of chemicals in use in California. This increased public awareness about health risks is likely to have an impact on the chemicals manufacturers use in their products.

Together, AB 1879 and SB 509 sweep virtually all chemical and consumer products under an umbrella of potential regulation. These laws expand on earlier state measures that regulate particular chemicals in particular products. For instance, California recently adopted regulations meant to reduce formaldehyde exposure from wood products, and it also enacted standards for phthalates (used in plastics and other products) in toys and child care products (AB

1108), as well as requiring disclosure of chemicals used in cosmetics (SB 484). Often, these laws are born out of high-profile events. For instance, studies in recent years have suggested (though it is not conclusive) that phthalates in baby bottles and other products used by infants may increase health risks, even at low doses. The outcry over formaldehyde in wood products has partially been the result of news reports about possible health effects to people living in Federal Emergency Management Agency trailers with allegedly high formaldehyde levels after Hurricane Katrina. These laws banning and regulating chemicals are all part of a growing trend in favor of taking preventative action to avoid potential future harmful impacts.

California’s move to green chemistry is apparently unique in the United States — California is the only state that has enacted such a radical initiative. But this approach already exists in Europe, with the European Union’s 2006 passage of the its REACH law. REACH is broader in scope than California’s laws, requiring a comprehensive and detailed database of all chemical substances manufactured, used or even imported into the European Union, and REACH shifts responsibility for testing and risk evaluation from the regulators to the manufacturers or importers of the substances. REACH also requires all manufacturers and importers to register substances used, and conduct chemical safety assessments. Because of the fact that the law “reaches” all manufacturers and importers to the European market, the REACH law is already having a significant impact on United States businesses.

The stated goal of these laws is to increase public information regarding chemical risks and compel consumer product manufacturers to reconsider the design of their products. The impacts of certain laws will be immediate, for instance, there are strict limitations on formaldehyde emissions from wood products, and businesses in the wood industry must adapt immediately to satisfy the law. Regulations



as to other chemicals based on AB 1879 will take time to develop, but one important component is that the Department of Toxic Substances Control will likely have the ability, in conducting a chemical evaluation, to require manufacturers to supply the information they have on particular chemicals and their health and environmental impacts (subject to trade secret protections). In the meantime, the mere fact that the laws exist may compel manufacturers to reconsider the design of certain products in order to reduce health or environmental impacts. In a sense, environmental decisions will become economic decisions, as manufacturers must weigh the risks and benefits of using a particular chemical in the products’ design phase, as opposed to cleaning up the mess after it occurs. Given the public’s shifting environmental consciousness, such business decisions may also have financial benefits. Businesses may wish to get ahead of the law by altering the design of a product, or instituting new measures for disposal of the product, before a state agency essentially orders them to do so.

Passage of the green chemistry laws may have other, perhaps unintended consequences. For instance, because AB 1879 allows state agencies to consider “alternatives” to certain chemicals in consumer products, and requires consideration of the products performance or function, it is likely that green chemistry laws will in

the future be the subject of litigation in tort lawsuits, particularly product liability claims where a fact-finder must assess whether the risk of harm from a chemical outweighs the benefit. If the Department of Toxic Substances Control evaluates or suggests an alternative to a chemical as part of the regulatory process, plaintiffs may claim that the department has already done the work for them, thereby establishing the defendants’ liability. In addition, courts may in the future grapple with whether the statutory standard under AB 1879 (“significant adverse impact”) can be used by a plaintiff in a tort lawsuit to prove or at least bolster a claim that exposure to a chemical was legally a “substantial factor” in causing injury, as is required by law.

This “new chemical world order” is upon us. Green chemistry represents a reconstitution of the manner in which chemicals are regulated. Manufacturers of consumer products must be aware of the law and understand the potential consequences, including evaluating product design and considering alternatives to reduce potential health and environmental risks. The government is paying attention.

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