

Looking Forward - The Next Generation of Product Stewardship

Alert - January 9, 2017

Authors - [Alison Gauthier](#), [Jamie Schenk, M.P.H.](#), [Marie T. BenKinney](#), [Elaine L. Freeman, DABT](#), [Jane P. Staveley, M.S.P.H.](#), and [Mary Ko Manibusan, M.P.H.](#)

Product stewardship is defined as the act of minimizing the health, safety, environmental, and social impacts of a product and its packaging throughout all lifecycle stages, while also maximizing economic benefits.¹ Elements of product stewardship can either be voluntary or required by law. Product stewardship has traditionally been associated with developing and maintaining compliance with the myriad regulations concerning a company's products and product lines. In recent years, product stewardship has also been used to meet demands of consumers for "greener" products and increase their brand reputation. In this 4th part of our technical series, we aim to demonstrate how companies are going beyond regulations and why it is important to bring product stewardship practices into the 21st century.

In this week's case study, we highlight how Exponent helped a multinational company modernize their product sustainability program to encompass the health, ecological impact, and policies of their materials.

Exponent assisted a multinational consumer products company in enhancing their pre-existing product sustainability program by assessing the criteria and metrics used to rate consumer products. The project team was comprised of a multidisciplinary group of consultants with applied expertise in areas including REACH regulation, biocides chemistry, mammalian toxicology, Proposition 65 compliance, and ecological toxicity. Exponent assisted the company in addressing chemicals used in a multitude of product lines across numerous ingredient categories, encompassing a huge variety of products requiring specific rating criteria. Exponent's evaluation ranged from developing human health-based toxicological and ecological criteria to assessing the quality of product-related data submitted by suppliers. Exponent also worked to develop metrics on how to track improvements in their overall product lines.

A major component of the project was updating the raw materials program to include a current list of international regulations and develop specific toxicity criteria to differentiate which raw materials are preferable based on their hazard profile. One of the fundamental issues in establishing such a program is how to comparatively rank different hazards against one another. For instance, how does one raw material with high aquatic toxicity compare to another with toxicity endpoints such as endocrine disruption? This question was addressed using a rigorous and scientifically defensible methodology rooted in toxicology, chemistry, and regulatory science. Exponent also assisted in developing internal standards for product packaging, including criteria on recyclability, emissions potential, raw versus reused materials, and the chemicals used in processing of paper packaging, such as bleachers and whiteners.

Another aspect of this project was enhancing supply chain management as part of the overall product stewardship program. The questions addressed included when to require a supplier to provide test data versus when to perform product or ingredient testing in-house, when to audit suppliers, and how to develop a program to review supplier information.

What We Provide

Exponent's capabilities within product stewardship include:

- Designing and evaluating a product stewardship program, with or without a complete chemical inventory
- Transitioning processes and corporate goals from regulatory to proactive product stewardship
- Developing responsible care initiatives
- Preparing and maintaining chemical and supplier databases

[This news alert is part of a cross-disciplinary series on how green chemistry concepts are put into practice across industries and business sectors.]

¹ <http://www.productstewardship.us/?55>