Sustainable skin care made to order

EVONIK develops sustainability database, the CAREtain® Toolbox: Transparency in every detail

When it comes to their own skin, end users in Western industrialized countries are highly sensitive and demanding. Care products have to be effective – but they must not harm people or the environment. This is why nature-related ingredients are so popular among consumers.

Many cosmetics producers address this issue by having their products certified – by the ECOCERT standard for natural and organic cosmetics, for example. But multi-national cosmetic companies go one step further. They want to know the environmental footprint of their products over the entire value-added chain, so they can achieve their own environmental goals and advertise certifiable product properties. Moreover, they now realize that an image that reflects social and environmental responsibility greatly enhances a cosmetic's brand value.

Suppliers to the cosmetics industry, such as Evonik, witness this trend. In recent years, questions regarding the CO_2 footprint or the proportion and origin of natural ingredients have become more and more common and multi-dimensional.

That was the starting point for establishing of a Sustainability Working Group within the Personal Care Business Line.

The goal of the working group was to develop a substantial and holistic approach to the subject of sustainability. Its first task was to create a sustainability database, the CAREtain® Toolbox. All data on the standard products of Personal Care was collected by a method coordinated with key customers. The CAREtain® Toolbox enables cosmetics manufacturers to substantiate their individual product claims regarding sustainability. Model life cycle analyses, supported by Creavis' Life Cycle Assessment team, show certain influencing factors and formulation concepts.

CAREtain® Toolbox: Transparency in every detail

The CAREtain® Toolbox now maps about 25 environmentally relevant factors for Evonik's most important cosmetic ingredients. Among these is the eco application profile, which describes the distinctive features of a product's application. If a shampoo rinses easily out of the hair, for instance, it can help the consumer save on the cost of warm water. This is based on findings such as the fact that about 54 percent of the CO_2 footprint of a cosmetic product is determined by the raw materials, and up to 46 percent by the production process. But the actual application can make up an astounding 400 percent.

Under the eco processing profile, the customer can find such information as whether the product was manufactured in a cold process and therefore helps save energy, or whether it reduces transport volumes, and therefore CO_2 emissions, more than conventional products. The database also contains information on the production process, the chemical composition of a particular product, the certification status, and much more.

Based on this information, customers can design the formulation of their products to their specific sustainability priorities – depending on whether their goal is to reduce water or energy consumption, for example, or lower emissions. CAREtain® also helps companies describe the eco-friendliness of a product that cannot be certified for a specific reason. For example, such a product might be based on a renewable raw material and show a very positive CO_2 footprint but require more process steps than allowed under ECOCERT.

This allows cosmetics manufacturers to distinguish themselves from the competition. When the CAREtain® Toolbox was launched in New York and Hong Kong in 2012, customers were impressed by the tool's unique depth of information and transparency. The data is currently provided to the customer upon request. But a web-based version of the Toolbox is under development, and Evonik customers will be able to obtain the data direct from the Internet as early as 2014.

CAREtain® Future Profiling: For products with a future

After establishing the database by creating the Toolbox, the working group turned to the question of sustainability: What would the product profile of a sustainable product look like? The group discussed this question with key customers of Personal Care. Together, they defined criteria and parameters for sustainable products.

Nine factors were identified as critical to success:
- Technical efficiency
- Long-term profitability and efficiency for consumers
- Transparent composition/origin
- Innovative process and product concepts
- Supply chain security
- Internationally recognized certificates
- Transparency in the value-added chain and documentation
- Suitability for growth markets and, if applicable, social benefits
- Sales and marketing aspects.

In total, the assessment model comprises up to 70 criteria per product, which are analyzed and classified based on their relevance for Evonik and its customers. Products are compared within their relevant application segments. This results in a sustainability factor (Key Performance Indicator, KPI) for each product, which describes its sustainability within this segment. The higher the KPI, the greater the chances that the product will succeed on the cosmetics market long-term.

CAREtain® Evolution: Targeted innovation management

Last but not least, the working group evaluated products from Evonik's Personal Care Business Line at their 2013 level. Summarized for the three product groups – Actives (active ingredients), Leave on (for example, creams that remain on the skin) and Rinse off (for example, shampoos or shower gels that are washed off) – these values provide the starting point for future innovation and portfolio management.

The direction is clear: more sustainability, but with a sense of proportion. For example, the values to 2018 should increase by 10 (Actives and Leave on) and 16 percent (Rinse off). With CAREtain®'s comprehensive analysis and its integration into existing innovation structures, product developers have a precise profile of requirements for pilot projects at their disposal.

6 questions to the experts of Evonik – Peter Becker, Sustainability Key Account Manager and Dr. Thomas Satzinger, Head of Global Marketing, Personal Care about CAREtain® Toolbox

Euro Cosmetics: *An increasing number of consumers are demanding near-natural ingredients in their cosmetic products. The product should be effective and gentle on the skin; at the same time it should be produced in a socially acceptable and resource-conserving way. Cosmetics producers are taking account of this and wish to know the ecological footprint of their products. Evonik has reacted to this development with the establishment of a Sustainability Working Group. What was the objective here?*

Dr. Thomas Satzinger: With the establishment of an internal sustainability group, we've reacted very promptly to increasing market requirements; consumers today want to know far more about their cosmetic products than even a few years ago. Some of the questions posed by consumers are: Where do the raw materials in my cosmetics come from? Am I damaging the environment in the process? Can my behavior make a positive contribution toward conserving the environment?

The aim of the Working Group was to develop a substantial and comprehensive approach to the subject of sustainability, so as to be able to provide comprehensive answers to consumers' questions.

Euro Cosmetics: *Evonik has developed a sustainability database, the CAREtain® Toolbox. Could you tell our readers more about this tool?*

Dr. Thomas Satzinger: The CAREtain® Toolbox is, as the name implies, a toolbox for cosmetics formulators. It gives them all the sustainability-relevant information for Evonik Personal Care standard products that is not available in the usual datasheet. Everything from the ecological application and consumption profile, through the composition, to energy consumption is contained in the CAREtain® Toolbox. The CAREtain® Toolbox thus makes it easier for cosmetics producers to substantiate the sustainability claim they provide on individual products.

Euro Cosmetics: *How many cosmetics ingredients does the CAREtain® Toolbox contain at present?*

Peter Becker,
Sustainability Key
Account Manager

Dr. Thomas Satzinger,
Head of Global Marketing, Personal Care

Peter Becker: The CAREtain® Toolbox currently carries about 25 environmentally relevant factors for Evonik's most important cosmetics ingredients. These include the ecological application profile, describing the special application features of the product. If, for example, a shampoo is particularly easily washed out of the hair, this could save water for the end user. This is based on the finding that about 54 percent of the carbon footprint of a cosmetic product is determined by the raw materials and about 46 percent by the production method. The contribution of the subsequent application can amount to an astounding 400 percent, however.

From the ecological processing profile, the customer can find information on, for example, whether the product contributes to energy conservation by production in a cold process, or whether, due to a higher concentration than is normal in the market, transport volumes and thus CO_2 emissions are reduced. The database also contains information on the manufacturing process, the chemical composition of each product, and the certification status. On the basis of this information, customers can design the formulation of their products in accordance with their specific sustainability claims - depending, for example, on whether they're aiming at reducing water consumption, energy consumption, or emissions.

Euro Cosmetics: *What specific advantages do your customers derive from the CAREtain® Toolbox?*

Dr. Thomas Satzinger: It allows cosmetics producers to differentiate themselves more clearly from the competition. At the introduction of the CAREtain® Toolbox 2012 in New York and Hong Kong, customers were impressed by the unique depth of information and transparency of this tool. At present customers are being supplied with data on request, but we're already working on a web-based implementation of the Toolbox.

Euro Cosmetics: *Your Sustainability Working Group has also been giving thought to sustainable products (CAREtain® Future Profiling). What are your findings in this area?*

Peter Becker: After the database was created with the Toolbox, the question arose in the Sustainability Working Group of what the profile of a sustainable product actually looked like. The Group then also discussed this question with key customers of Personal Care; together we defined criteria and measurement parameters for sustainable products.

The evaluation model includes a total of up to 70 criteria for each product, all of which have been analyzed and classified according to their relevance for Evonik and its customers. Products are compared within the relevant application segment. The end result is a Key Performance Indicator, or KPI, for each product that represents the sustainability of a product in this segment. The higher the KPI, the greater are the chances that the product will establish itself on the cosmetics market over the long term.

CAREtain® Future Profiling also helps us align new products even better with the needs of our customers.

Euro Cosmetics: *What are we to understand by "CAREtain® Evolution"?*

Dr. Thomas Satzinger: Finally, the Workgroup analyzed the products of Evonik Personal Care as in 2013. Summarized for the three product groups – actives (active ingredients), leave-on (such as creams that remain on the skin), and rinse-off (such as shampoos and douche gels, which are washed off) – these values provide a base for future management of innovation and product range. For example, the values are expected to increase by 10% for actives and leave-on, and by 16% for rinse-off, by 2018. The comprehensive analysis in CAREtain® and its integration into existing innovation structures provide product developers with an accurate requirements profile for innovation projects. The product range can thus be developed further, not just by introducing new products but also by improving documentation and offering new application forms for existing products.

Euro Cosmetics: *Thank you for the conversation.*