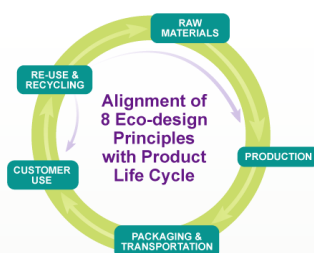


# Showcasing Eco-Innovation

*New Emulsions Reduce Water and Energy Use*



## PRODUCTION

1. Minimize waste and consumables
2. Use renewable and reclaimed external feed stocks
3. Increase energy efficiency and reduce greenhouse gas emissions
4. Design less toxic and environmentally safer products and processes

## PACKING AND TRANSPORTATION

5. Optimize packaging and transportation logistics to minimize energy and materials requirements and reduce potential for accidents

## CUSTOMER USE

6. Enable use of renewable energy and raw materials
7. Enable resource conservation by customers and end-use consumers

## RE-USE & RECYCLING

8. Create value from waste

*Eco innovation blends Dow Corning's passion for innovation with one of our corporate values - sustainable development. It's an approach that brings together our focus on meeting our customers' needs for new environmentally compatible products and processes with our commitment to responsible management of resources.*

*We're using our eco-innovation model and principles to help conserve precious natural resources; rescue waste and increase use of renewable energy materials. This case study shows you how we are bringing our sustainability value to life.*

## Brief Description

One of the biggest trends in personal care today is the use of natural ingredients in cosmetic products. To meet the needs related to this trend, Dow Corning has designed new silicone solutions that enhance the performance of natural ingredients.



Dow Corning® 7-3121 and Dow Corning® 7-3123 emulsions enable customers to incorporate both silicones and natural lipids for use in skin care, anti-aging, sun care, bath and shower, and hair care applications.

Along with the consumer appeal associated with using natural ingredients, these concentrated emulsions also help to save water and energy use through reduced packaging and simplified production processes.

## Eco-Innovation – A Closer Look

Two recent offerings for the personal care industry are concentrated emulsion products containing natural lipids and silicones in an easy to use delivery system. These products encourage the use of ingredients available in abundance (such as Mango seed oil) that do not interfere with the food chain in developing countries.

In addition, with the lowest possible presence of water (up to 80% concentration of actives versus 20-40% in traditional emulsions), these emulsions reduce packaging requirements, transportation and associated energy use.

## Alignment with Eco-Design Principles

**Principle 2** – Use renewable and reclaimed external feed stocks

**Principle 5** – Optimize packaging and transportation logistics to minimize energy and materials requirements and reduce potential for accidents

**Principle 8** – Create value from waste

## Health, Environmental & Social Benefits

- These emulsion products can be used at room temperature through a simple mixing process for hair care and skin care cosmetics products, thus reducing the need for energy-intensive production processes.
- Because these products are delivered to customers in emulsion form, cleaning procedures are significantly simplified and the need for cleaning solvents is virtually eliminated.
- These emulsions contain less water and higher actives concentrations than traditional emulsions, reducing packaging volume and associated energy use.

## Value Relating to the Eco-Sustainable Attributes

Dow Corning® 7-3121 and Dow Corning® 7-3123 emulsions enable customers to reduce their water and energy consumption through simplified processes and improved packaging and transportation. Simplified procedures and room-temperature operations also reduce the time required for production.

Expanded use of these products in the future will reduce our customers' energy and water footprints and will also promote the use of low-impact, abundant natural resources – reducing food chain impacts in areas of the world that can least afford them.

## Learn More

To learn more about sustainability in action at Dow Corning, visit <http://www.dowcorning.com/content/about/sustainability.aspx>

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*We help you invent the future.™*