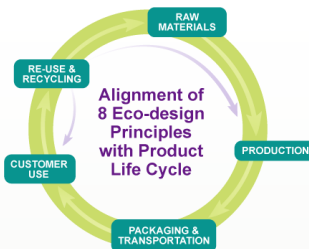


# Showcasing Eco-Innovation

## Sealant Road Tankers Deliver a Winning Alternative



### 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

Traditional delivery of bulk sealants involves loading metal drums filled with product onto a trailer and unloading the drums at the destination. The product is then packaged for delivery to the customer. This process requires significant handling and storage.



Dow Corning is using a transportation and delivery alternative for a number of key customers – filling the tanker itself with bulk silicone sealant and then dispensing the product directly into the customer's packaging containers at the destination. This process eliminates drum handling and storage.

### Eco-Innovation – A Closer Look

How does the process work? The tanker is equipped with patented piston technology. The revolutionary tankers have two chambers, separated by a piston. The back of the car holds the silicone sealant, and the front of the car contains nitrogen.

During the filling operation, the sealant pushes the piston to the back, and the nitrogen escapes. To dispense the product, the piston follows the sealant, and nitrogen is fed to maintain slight pressure on the front end, pushing the sealant out the front. Following delivery, the empty truck returns to the production facility for another load.

Today, about three dozen of these specially-equipped tankers are dedicated to delivering Dow Corning bulk sealant.

## Alignment with Eco-Design Principles

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

**Principle 7** – Enable resource conservation by customers and end-use consumers

## Health, Environmental & Social Benefits

- Tankers do not require cleaning between shipments, conserving resources and reducing waste.
- The drum-less operation means that no energy is expended in moving drums, and no sealant is wasted during the transfer of product into and out of the drums.
- Elimination of drum handling also reduces the potential for accidents..

## Value Relating to the Eco-Sustainable Attributes

Dow Corning is the sole silicone vendor to offer this patented type of delivery – we stand out from the competition. Tanker delivery has resulted in lower waste disposal and reduced energy costs for our customers. In the future, these tankers could be used to deliver other Dow Corning products to customers, increasing the value of this patented delivery method.

## Learn More

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

**DOW CORNING**

*We help you invent the future.™*