

FOCUS! NEWSLETTER

Performance & Sustainability

A newsletter focusing on the performance and sustainability of NOVA Chemicals' products

October 2011

 FORWARD

 SHARE THIS NEWSLETTER

Special Feedback Edition

Editor's note: *FOCUS!* readers have plenty of ideas, and we've heard from many of you! As we promised, all stories in this edition originate from comments and questions of readers of past newsletter editions.

- [A Closer Look at Life Cycle Thinking](#)
- [Meeting Sustainability Goals Voluntarily is the 'SmartWay'](#)
- [Cube-Down Case Studies Highlight Dramatic Reductions by ARCEL® resin](#)
- [UPES® resin team returns to SPE Thermoforming Conference!](#)



A Closer Look at Life Cycle Thinking

We heard from readers who want to know more about the Life Cycle movement generally as a follow-up to a recent article. In the article we reviewed several Life Cycle analyses of polystyrene foam demonstrating dramatic energy savings and the smaller environmental footprint of foam vs. other materials.

One study reported how using EPS foam insulation in single-family homes saves energy substantially and rapidly; another Life Cycle Inventory analysis showed ARCEL® resin outperforms in lowering packaging energy impacts; additionally, we examined the energy saving capabilities of UPES® resin for polyolefin processors. Please [click here](#) for the full article and the Life Cycle analyses reviewed.



Life Cycle thinking is increasingly taking hold in the global economy. It is a cradle-to-grave approach recognizing that all product life cycle stages have economic, environmental and social impacts. An end-to-end life cycle involves the stages of extracting and processing raw materials, manufacturing, transportation and distribution, use/reuse and recycling and waste management.

To support businesses in their drive towards sustainability, in addition to addressing climate change, Life Cycle Assessments (LCA) help identify ways to reduce the need for natural resources. Most companies in Europe or exporting to this continent face pressure to perform LCAs on their products and services. In North America, sustainable procurement is gaining popularity and there is a consensus supporting the use of Life Cycle-based tools to address this issue.

FOCUS! asked Mike Levy, Director of Life Cycle Management Issues for the Plastics Division at the American Chemistry Council, where to find the best web site on the Life Cycle movement. He suggests [this site for information on the global Life Cycle Initiative](#).



Contact ARCEL® resin

Phone: 1-724-770-5555

Email
arcel@novachem.com

Website
<http://www.arcelresins.com>



Phone: 1-877-877-0062

Email
performance@novachem.com
Website www.novachemicals.com/eps



Contact UPES® resin

Phone: 1-724-770-6610

Email
upes@novachem.com

Website
www.upesresin.com



Meeting Sustainability Goals Voluntarily is the 'SmartWay'

We heard from readers who wanted to know more about the U.S. EPA's SmartWay program that was mentioned in our story about the cost savings and environmental benefits realized by companies implementing cube-down strategies. Readers wanted to know if the program is voluntary.

Yes, it is -- and as our readers well understand, voluntary participation, rather than demands from regulatory agencies, is the ideal way to become involved in more sustainable practices.



We'd Like to Hear from You



Do you have questions, or a packaging reduction story using one of our resins? Let us know! We also welcome any feedback or suggestions surrounding our newsletter and its content.

Please write to:
sustainableolutions@novachem.com.

The article analyzed approaches by Best Buy and their desire to embrace cube-down as a way to voluntarily achieve their sustainability goals.

Contained in the article was a Life Cycle Inventory (LCI) study by Franklin Associates. This study found that cube efficiency had the largest influence on the environmental footprint of the protective packaging systems analyzed. ARCEL® advanced foam resin was one of the materials analyzed. To review the study, please [click here](#).

SmartWay is a voluntary partnership between the EPA and the freight industry. Its goal is to substantially lower emissions of CO2 and nitrogen oxide, and the program encourages carriers to improve fuel-efficiency and save money. Carriers conserve over 540 million gallons of diesel fuel per year, saving the trucking industry more than \$2 billion in annual fuel and maintenance costs and eliminating over 6 million tons of carbon dioxide emissions that contribute to global warming. [Click here](#) to learn more about the SmartWay program.

Companies such as Hewlett-Packard, an early SmartWay partner and the first to have its logo displayed on its packaging, are committed to environmental stewardship while driving down costs. Recently the editor of FOCUS! bought a HP printer and noticed the most prominent label on the box was for SmartWay! [Click here](#) for more on HP's involvement in the initiative.

In another voluntary effort, Wal-Mart cut its carbon footprint by reducing packaging and rerouting trucks, shaving off 100 million miles from delivery routes in 2009. This saved the company \$200 million even as it shipped more products, according to Michael Porter, a professor at Harvard Business School, who endorses these efforts throughout the value chain.

With Hewlett-Packard, Best Buy, Wal-Mart and many others taking voluntary leadership, why not promote these initiatives for your company or business partners?



Cube-Down Case Studies Highlight Dramatic Reductions by ARCEL® resin

Readers who enjoyed a case study about a flat-panel TV manufacturer who cut freight costs and emissions asked us for more examples of companies implementing cube-down strategies.



Our newest case study is for a manufacturer of laser jet printers. Working with ARCEL® resin, the manufacturer wanted to reduce the packaging size for one high-volume printer while meeting its sustainability criteria and decreasing the overall cost of the packaging solution.

The change from EPS to ARCEL resin resulted in a 4.7 percent cost savings while allowing 17 percent more printers per load and significantly reduced carbon emissions by 6.5 percent. By selecting ARCEL resin for its packaging cushioning, the company was able to strike a balance between performance, cost and sustainability.

This builds upon our previously released study of flat-panel TVs. The TV manufacturer compared shipping with a typical corrugated carton and conventional foam cushioning, versus the same product with ARCEL resin

cushioning. The results were dramatic, as the company reduced its truckloads from 893 to 298 trips -- a 67 percent savings. [Click here](#) for the case study and full results. In both cases, truckloads of 100,000 units were shipped 1,000 miles by conventional motor freight.

Steve Abeyta, ARCEL Global Business Director at NOVA Chemicals, says those results are the norm. "Our cube-reduction research indicates that ARCEL resin can reduce truckload shipments by 50 percent or more versus traditional foam-cutting fuel consumption and emissions in half," he says. Not only that, ARCEL resin can also reduce the waste stream significantly by decreasing cushioning volume, and in many cases by eliminating other packaging materials.

If you'd like more case studies showing dramatic reductions, please contact the ARCEL resin team.

UPES® resin team returns to SPE Thermoforming Conference!



NOVA Chemicals Inc.'s UPES® resin team was pleased to return as an exhibitor at the 20th SPE Thermoforming Conference in September. We enjoyed seeing familiar faces as well as meeting many new individuals who are excited to learn more about the benefits of using UPES resin in thermoforming. We would like to give a special thanks to the SPE Thermoforming Committee for their dedication to facilitating the advancement of the thermoforming industry. Congratulations on hosting the premier thermoforming conference for the last two decades, well done!

If you missed the show but would like to learn more about how our UPES resin additive helps in the smart design of olefin based rigid and foamed thermoformed parts to result in a solution that is better performing and more sustainable while maintaining costs, please contact us at 724.770.6610 or upes@novachem.com. Our goal is to help customers succeed. We view every project as a chance to collaborate and turn conventional designs into innovative, better performing, more sustainable end products.

ARCEL® and UPES® are registered trademarks of NOVA Chemicals Inc.



and



are trademarks of NOVA Chemicals Inc.



is a registered trademark of Society of Plastics Engineers, Inc.



is a registered trademark of the U.S. Environmental Protection Agency.