

# Greenlist Bulletin

From the Toxics Use Reduction Institute  
at the University of Massachusetts Lowell

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## In This Issue

Environmental officials announce  
new toxic chemical rules

Growing materials: thermoformed  
'grow trays' molding packaging  
sustainability

Hidden hazards in the nursery


Bioplastics firm Telles closing;  
Metabolix to downsize

Unique soy-based mastic offers  
greener solution for waterproofing

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This is the weekly bulletin of the TURI Library at the University of Massachusetts Lowell. Greenlist Bulletin provides previews of recent publications and websites relevant to reducing the use of toxic chemicals by industries, businesses, communities, individuals and government. You are welcome to send a message to [jan@turi.org](mailto:jan@turi.org) if you would like more information on any of the articles listed here, or if this email is not displaying properly.



## Environmental officials announce new toxic chemical rules

[Source: Massachusetts Executive Office of Energy and Environmental Affairs. January 11, 2012](#)

Energy and Environmental Affairs (EEA) Secretary Richard K. Sullivan Jr. today announced new regulations regarding the use of toxic chemicals in Massachusetts. The regulations, which took effect January 1, increase the number of companies required to report use of some of these chemicals by approximately 20 companies.

The Toxics Use Reduction Administrative Council, the six-member governing body of the Toxic Use Reduction program overseen by EEA, and chaired by Secretary Sullivan, designated both hexavalent chromium compounds and formaldehyde as Higher Hazard Substances and added 16 chemicals to the Toxic Use Reduction Act (TURA) list of toxic or hazardous chemicals. The designations require additional companies to report on the use of these chemicals and evaluate whether there are cost-effective ways to reduce that use.

"These new rules protect public health and provide companies with assistance to decrease the use of these harmful substances over time," said Secretary Sullivan.

The TURA Council is charged with coordinating state enforcement of laws and regulations on chemical use and toxic waste generation, implementing policies that promote worker health and safety, and safeguarding public health. Under EEA's new regulations, as of January 1, companies are required to track usage for hexavalent chromium compounds and formaldehyde for inclusion on reports to be filed with the Department of Environmental Protection (MassDEP) on July 1, 2013. Companies using these chemicals must also submit to MassDEP summaries on plans to reduce their use on July 1, 2014.

As a result of the higher hazard designations, the council lowered the reporting thresholds for hexavalent chromium compounds and formaldehyde from 10,000 or 25,000 pounds, depending on how the chemicals are used at manufacturing facilities, to 1,000 pounds. The industries affected by the hexavalent chromium compounds designation include companies that use custom compounded resins, inorganic pigments, plastics products, or which perform plating or surface finishing. The number of companies required to report use is estimated to rise from eight to 20 statewide.

Those affected by the formaldehyde designation include coated fabrics, coated and laminated paper, and chemicals and resins manufacturing. The numbers of companies required to report is estimated to increase from nine to as many as 20 statewide.

EEA's Office of Technical Assistance and Technology (OTA) will help companies affected by this new reporting requirement find and implement less toxic, cost-effective alternatives that will allow them to operate more safely while remaining competitive in the global economy. Alternative manufacturing methods and chemical substitutes are expected to be available for most users.

[Read more](#)

#### Growing materials: thermoformed 'grow trays' molding packaging sustainability

[Source: Plastics Today, January 18, 2012](#)

Author: Heather Caliendo

Some companies manufacture packaging materials; others prefer to grow crops. However, two companies have combined the two processes for one purpose: growing sustainable packaging.

Natural material supplier Ecovative has collaborated with thermoformer Dordan Manufacturing, on the design of new thermoformed grow trays, which are used to hold Ecovative's packaging material consisting of agricultural crop waste and mushroom roots.

Ecovative environmental director Sam Harrington told PlasticsToday the company "literally" grows materials.

Ecovative grows EPS-like packaging material out of agricultural waste utilizing the biology of fungal mycelium to "bind" the fibers together, according to the company.

"We use a living organism, fungal mycelium, to transform lignocellulosic crop wastes (like seed husks and plant stalks) into a chitinous biopolymer," he said. "Today, these materials are being sold as EcoCradle custom molded protective packaging."

While Ecovative first applied this technology to the packaging industry by supplying custom designed protective packaging, it now offers several stock packaging/products such as the recently designed EcoCradle insulated shipping cooler. During the grow process, Ecovative uses thermoformed grow trays that serve as the molds in which its material is formed into the product during a seven-day period.

Chandler Slavin, sustainability coordinator for Dordan, said Ecovative collaborated with Dordan on the design and manufacture of its cooler thermoformed grow trays due to the company's experience applying engineering-based, thermoformed solutions to a variety of custom projects.

Ecovative looked for a standardized tray format to allow for easy and consistent integration into its custom filling and washing stations, according to the company.

[Read more](#)

## Hidden hazards in the nursery

[Source: Washington Toxics Coalition and Safer States, January 11, 2012](#)

Popular baby products, including nursing pillows and car seats, contain toxic flame retardants linked to cancer, hormone disruption, and other health effects, according to a new report released today by the Washington Toxics Coalition and Safer States. Children and families are exposed to the compounds, called Tris chemicals, when they escape from household items and contaminate house dust and indoor air.

"Parents shouldn't have to worry about hidden toxic chemicals in their child's nursing pillow or car seat. Unfortunately, our testing shows many items contain toxic flame retardants that aren't good for children's health," said Erika Schreder, author of the report and science director for the Washington Toxics Coalition.

The report, Hidden Hazards In the Nursery, found toxic flame retardants in 85% (17 of 20) of new baby and children's products tested, including bassinet pads, nursing pillows, changing pads, and car seats. The most prevalent flame retardant found was chlorinated Tris (TDCPP), a chemical voluntarily removed from children's pajamas in the 1970s when it was found to cause adverse health effects. Chlorinated Tris was present in 80% of the products (16 of 20). California recently classified chlorinated Tris as a carcinogen, and evidence links the chemical to neurotoxicity as well as hormone disruption.

Several children's products did not contain Tris flame retardants, demonstrating it is possible to make products without Tris chemicals. Products that tested negative for Tris flame retardants were: Eddie Bauer Pop-up Booster Seat, Balboa Nursing Pillow, and First Years Co-Sleeper. Other companies that are known to not use Tris flame retardants include Boppy, Orbit Baby, and Baby Bjorn.

[Download the report](#)

## Bioplastics firm Telles closing; Metabolix to downsize

[Source: Mass High Tech, January 13, 2012](#)

Author: Michelle Lang

Telles LLC, the Lowell, Massachusetts-based joint venture between Cambridge bioplastics firm Metabolix Inc. and agri-giant Archer Daniels Midland Co. (ADM) is closing down, effective Feb. 8. As a result, Metabolix is planning to restructure its bioplastics business and downsize operations, with details being finalized.

ADM is backing out of the venture, it said in a news release, because of Telles' "uncertain" projected financial returns.

The joint venture was created in 2006 by the two companies to commercialize PHA bioplastics, including Mirel and Mvera. The biodegradable materials, produced at an Iowa manufacturing plant, are designed as alternatives to petroleum-based plastics.

ADM said it will retain the Iowa plant, while Metabolix will retain exclusive intellectual property rights to its own technology used in the joint venture.

The Cambridge company appeared to be surprised and disappointed by ADM's backing out of Telles, according to a conference call led by Metabolix CEO Richard Eno.

"Over the past few years, we now have proven the technology at industrial scale and believe that we now have the opportunity to launch this business with a different business model," Eno said in a statement.

In light of the dissolution of Telles, Metabolix said it plans to continue commercialization of its renewable industrial chemicals program; to retain a small business and launch team to pursue a new business model for the bioplastics business; and deliver on its \$6 million Department of Energy grant.

"It is highly likely that we'll not have an immediate economically viable supply source," Eno said, due to the lack of availability of production scale capacity for industrial customers.

## Unique soy-based mastic offers greener solution for waterproofing


[Source: Biobased Solutions, January 2012](#)

Inventor Lance Niemann of Green Eagle Technologies has developed the first soy-based waterproofing product that can replace traditional petrochemical-based sealants as a less toxic, less carcinogenic alternative for synthetic roofing surfaces.

According to Niemann, G.E.T. Biobased Mastic represents the first and only zero-VOC (volatile organic compound) mastic that has been certified through the ASTM Biobased Certification Program, registered as USDA 2071 with a biobased content of 37 percent. Formulated as a high-viscosity sealant, the mastic boasts excellent adhesion to virtually any roofing surface, including TPO (thermoplastic polyolefin), EPDM (ethylene propylene diene monomer), PVC (polyvinyl chloride) and all metals and plastics.

Once cured, G.E.T. Biobased Mastic reinforces and seals membrane seams. According to Roofing Contractor Association estimates, more than 80 percent of water penetration problems occur at seams and roof protrusions.

Niemann says that the manufacturing, application and disposal of toluene based mastics produce toxic byproducts, which contain numerous carcinogens and create a dangerous work environment. According to Niemann, G.E.T. Biobased Mastic will cost and perform similar to or better than petrochemical-based competitors. "G.E.T. Biobased Mastic is produced 100 percent here in America," says Niemann. "We use only American produced ingredients, and the manufacturing process also generates additional American jobs. With building trends focusing more and more on reduced VOCs as well as biobased content the product is an excellent choice for accruing Leadership in Energy and Environmental Design points through the United States Green Building Council."



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